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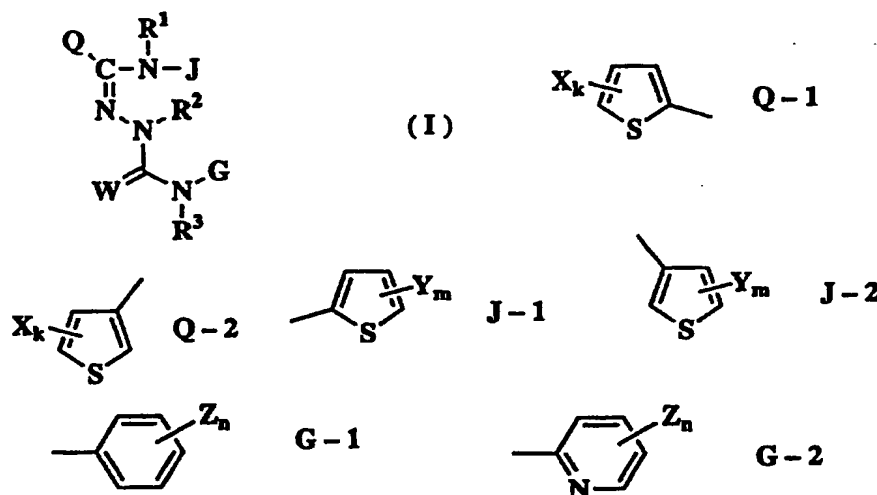
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(21) International Application Number: PCT/JP96/02022 (22) International Filing Date: 19 July 1996 (19.07.96) (30) Priority Data: 7/185814 21 July 1995 (21.07.95) JP 8/148379 17 May 1996 (17.05.96) JP (71) Applicant (for all designated States except US): NISSAN CHEMICAL INDUSTRIES, LTD. [JP/JP]; 7-1, Kanda-Nishiki-cho 3-chome, Chiyoda-ku, Tokyo 101 (JP). (72) Inventors; and (75) Inventors/Applicants (for US only): YAGI, Kazuo [JP/JP]; Nissan Chemical Industries, Ltd., Central Research Institute, 722-1, Tsuboi-cho, Funabashi-shi, Chiba 274 (JP). OHTSU, Tadashi [JP/JP]; Nissan Chemical Industries, Ltd., Central Research Institute, 722-1, Tsuboi-cho, Funabashi-shi, Chiba 274 (JP). IRIMATA, Atsushi [JP/JP]; Nissan Chemical Industries, Ltd., Central Research Institute, 722-1, Tsuboi-cho, Funabashi-shi, Chiba 274 (JP). OGURA, Tomoyuki [JP/JP]; Nissan Chemical Industries, Ltd., Central Research Institute, 722-1, Tsuboi-cho, Funabashi-shi, Chiba 274 (JP). MITA, Takeshi [JP/JP]; Nissan Chemical Industries, Ltd.,			Central Research Institute, 722-1, Tsuboi-cho, Funabashi-shi, Chiba 274 (JP). MIYAKE, Toshiro [JP/JP]; Nissan Chemical Industries, Ltd., Seibutsukagaku Kenkyusho, 1470, Oaza-shiraoka, Shiraoka-machi, Minamisaitama-gun, Saitama 349-02 (JP). INOUE, Youichi [JP/JP]; Nissan Chemical Industries, Ltd., Seibutsukagaku Kenkyusho, 1470, Oaza-shiraoka, Shiraoka-machi, Minamisaitama-gun, Saitama 349-02 (JP). MIMORI, Norihiko [JP/JP]; Nissan Chemical Industries, Ltd., Seibutsukagaku Kenkyusho, 1470, Oaza-shiraoka, Shiraoka-machi, Minamisaitama-gun, Saitama 349-02 (JP). TAKII, Shinji [JP/JP]; Nissan Chemical Industries, Ltd., Seibutsukagaku Kenkyusho, 1470, Oaza-shiraoka, Shiraoka-machi, Minamisaitama-gun, Saitama 349-02 (JP).
			(74) Agents: YAMAMOTO, Ryoza et al.; Torimoto Kogyo Building, 38, Kanda-Higashimatsushitacho, Chiyoda-ku, Tokyo 101 (JP). (81) Designated States: AU, BR, CA, CN, KR, LT, LV, MX, NZ, RU, SI, UA, US, VN, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report.

(54) Title: SEMICARBAZONE DERIVATIVES AND PESTICIDES



(57) Abstract

A semicarbazone derivative of formula (I) or its salt, and a pesticide containing it, are presented. In said formula (I) Q is Q-1, Q-2 or the like, J is J-1, J-2 and or like, G is G-1, G-2 and or like, W is an oxygen atom or a sulfur atom; each of X, Y and Z which are independent of one another, is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group or the like, k is an integer of from 0 to 5, provided that when k is from 2 to 5, the plurality of X may be the same or different; m is an integer of from 0 to 5, provided that when m is from 2 to 5, the plurality of y may be the same or different; n is an integer of from 0 to 5, provided that when n is from 2 to 5, the plurality of z may be the same or different; each of R¹, R² and R³ which are independent of one another, is a hydrogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group.

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DESCRIPTION

SEMICARBAZONE DERIVATIVES AND PESTICIDES

TECHNICAL FIELD

5 The present invention relates to novel semicarbazone derivatives and pesticides containing such derivatives as active ingredients.

BACKGROUND ART

Heretofore, with respect to semicarbazone derivatives
10 of benzamide, compounds of $4\text{-RC}_6\text{H}_4\text{C}=(\text{NHC}_6\text{H}_4\text{R}'\text{-4})\text{NNHCWNHR}''$
(wherein $\text{R} = \text{H}, \text{MeO}, \text{Me}, \text{Cl}, \text{NO}_2$; $\text{R}' = \text{H}, \text{MeO}, \text{Me}, \text{Cl}$;
 $\text{R}'' = \text{Ph}$; $\text{W} = \text{O}, \text{S}$) have been known in Eur. J. Med. Chem.,
26, 273 (1991). However, here, R'' is limited to an
unsubstituted phenyl group, and the corresponding
15 compounds wherein R'' is a substituted phenyl group are
novel. Further, 4-phenyl semicarbazone derivatives of 2-
pyridinecarboxanilide are disclosed in Ann. Univ. Mariae
Curie-Sklodowska, Sect. AA; Phys. Chem. 1980. Volume Date
1976-1977, 31-32, 277. However, these literatures
20 disclose nothing about pesticidal activities although
they indicate pharmaceutical activities.

In recent years, insect pests have acquired
resistance due to use of insecticides over many years,
and it has become difficult to control them by
25 conventional insecticides. Further, some of insecticides
have high toxicity, and some of them have residual
toxicity, whereby the ecosystem tends to be disturbed.

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Accordingly, it is desired to develop a novel insecticide having a low toxicity and a low residual effect.

DISCLOSURE OF INVENTION

The present inventors have conducted extensive
5 researches on semicarbazone derivatives and as a result, have found that novel 5- or 6-membered hetero ring-substituted semicarbazone derivatives and their salts exhibit excellent pesticidal activities, particularly insecticidal activities at a low dose, and they are very
10 useful compounds substantially free from adverse effects against mammals, fishes and beneficial insects. The present invention has been accomplished on the basis of these discoveries.

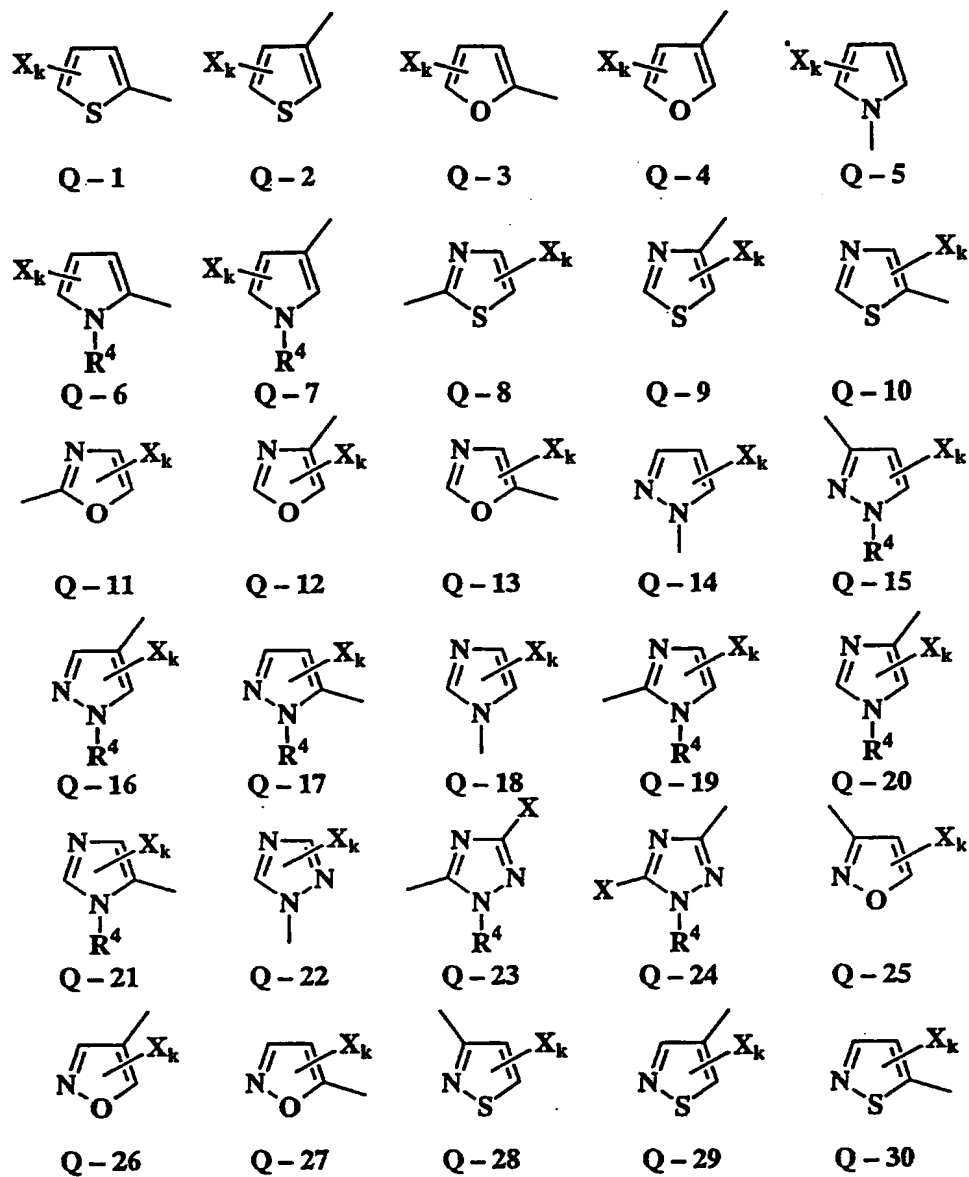
The present invention provides a semicarbazone
15 derivative of the formula (I) or its salt:



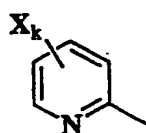
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wherein Q is any one of Q-1 to Q-37:

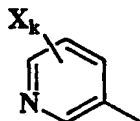
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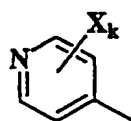
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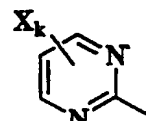
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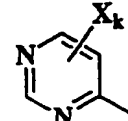
Q-32



Q-33

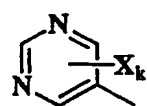


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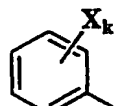


Q-35

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Q-36

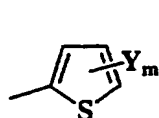


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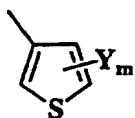
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J is any one of J-1 to J-33, provided that when Q is Q-37 and G is G-1, J is other than J-33;

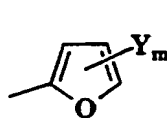
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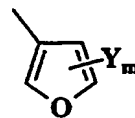
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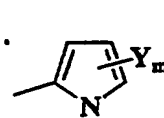
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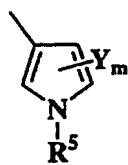
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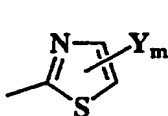
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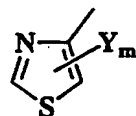
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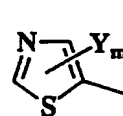
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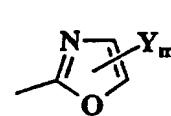
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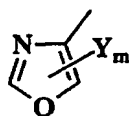
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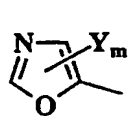
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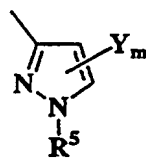
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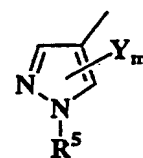
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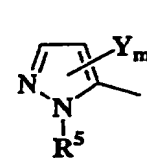
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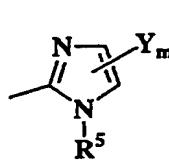
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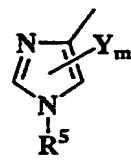
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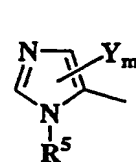
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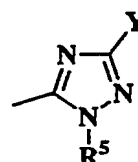
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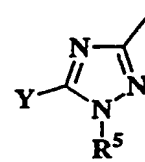
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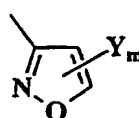
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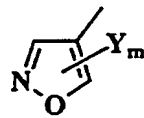
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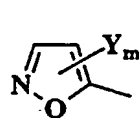
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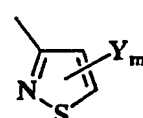
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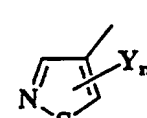
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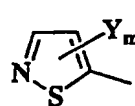
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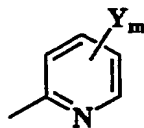
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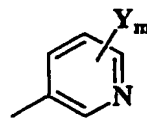
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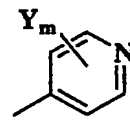
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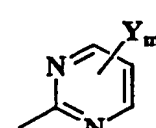
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J-28

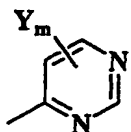


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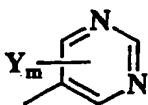


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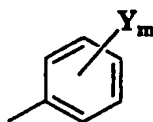
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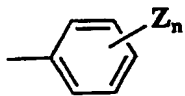


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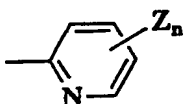


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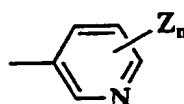
5 G is any one of G-1 to G-8, provided that when Q is Q-37 and J is J-33, G is other than G-1;



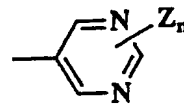
G-1



G-2

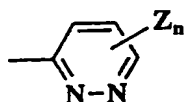


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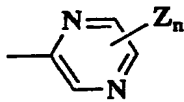


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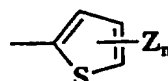
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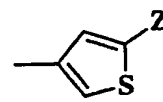
G-5



G-6



G-7



G-8

15

W is an oxygen atom or a sulfur atom;

each of X, Y and Z which are independent of one another, is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -N₃, -SCN, -NO₂, -SH, -S(O)_rR⁷, -OCHO, -CHO, -C(O)R⁷, -C(O)OR⁷, -C(O)NR⁷R⁸, -S(O)₂NR⁷R⁸, -NR⁷R⁸, -NR⁸CHO, -NR⁸C(O)R⁷, -NR⁸C(O)NHR⁷, -NR⁸S(O)₂R⁷, -SiR¹⁸R¹⁹R²⁰, -SF₅,
25 a phenyl group which may be substituted by (R⁶)_q, a pyridyl group which may be substituted by (R⁶)_q, or a C₁₋₆

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alkyl group which may be substituted by $(R^9)_p$, provided that when k, m or n is 2, and two X, Y or Z are adjacent to each other, they may form $-\text{CH}=\text{CH}-\text{CH}=\text{CH}-$, $-\text{OCH}_2\text{O}-$, $-\text{OCF}_2\text{O}-$, $-\text{OCH}_2\text{CH}_2\text{O}-$, $-\text{OCH}_2\text{C}(\text{CH}_3)_2\text{O}-$, $-\text{CF}_2\text{CF}_2\text{O}-$ or

5 $-\text{OCF}_2\text{CF}_2\text{O}-$;

each of R^1 , R^2 and R^3 which are independent of one another, is a hydrogen atom, a C_{1-6} alkyl group, a C_{2-6} alkenyl group, a C_{2-6} alkynyl group, a C_{1-6} haloalkyl group, a C_{2-6} haloalkenyl group, a C_{2-6} haloalkynyl group, 10 a C_{3-6} cycloalkyl group, a C_{3-6} halocycloalkyl group, a C_{4-7} cycloalkylalkyl group, $-\text{CHO}$, $-\text{C}(\text{O})\text{R}^7$, $-\text{C}(\text{O})\text{OR}^7$, $-\text{C}(\text{O})\text{SR}^7$, $-\text{C}(\text{S})\text{R}^7$, $-\text{C}(\text{S})\text{SR}^7$, $-\text{C}(\text{O})\text{C}(\text{O})\text{OR}^7$, $-\text{NR}^{10}\text{R}^{11}$, $-\text{N}=\text{CR}^{11}\text{R}^{12}$, $-\text{P}(\text{O})(\text{OR}^{13})_2$, $-\text{P}(\text{S})(\text{OR}^{13})_2$, $-\text{S}(\text{O})_r\text{R}^7$, $-\text{S}(\text{O})_2\text{CH}_2\text{C}(\text{O})\text{OR}^7$, $-\text{S}(\text{O})_r\text{N}(\text{R}^{14})\text{C}(\text{O})\text{OR}^{15}$, $-\text{S}(\text{O})_r\text{NR}^{16}\text{R}^{17}$, a 15 phenyl group which may be substituted by $(R^6)_q$, or a C_{1-6} alkyl group which may be substituted by $(R^9)_p$;

each of R^4 and R^5 which are independent of each other, is a hydrogen atom, a C_{1-6} alkyl group, a C_{2-6} alkenyl group, a C_{2-6} alkynyl group, a C_{1-6} haloalkyl group, a C_{2-6} haloalkenyl group, a C_{2-6} haloalkynyl group, 20 a C_{3-6} cycloalkyl group, a C_{3-6} halocycloalkyl group, a C_{4-7} cycloalkylalkyl group, a C_{2-6} alkoxyalkyl group, a C_{2-6} alkylthioalkyl group, a C_{1-6} nitroalkyl group, a C_{2-6} cyanoalkyl group, a C_{3-8} alkoxy carbonylalkyl group, $-\text{CHO}$, 25 $-\text{C}(\text{O})\text{R}^7$, $-\text{C}(\text{O})\text{OR}^7$, $-\text{C}(\text{O})\text{NR}^7\text{R}^8$, or $-\text{S}(\text{O})_2\text{NR}^7\text{R}^8$;

R^6 is a hydrogen atom, a halogen atom, a hydroxyl group, $-\text{CN}$, $-\text{NO}_2$, a C_{1-6} alkyl group, a C_{1-6} haloalkyl

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group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₂₋₆ alkoxycarbonyl group, an amino group, or a di-C₁₋₆

5 alkylamino group;

R⁷ is a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, 10 a C₂₋₆ alkoxyalkyl group, a C₂₋₆ alkylthioalkyl group, a C₁₋₆ nitroalkyl group, a C₂₋₆ cyanoalkyl group, a C₃₋₈ alkoxycarbonylalkyl group, a phenyl group which may be substituted by (R⁶)_q, a benzyl group which may be substituted by (R⁶)_q, or a pyridyl group which may be 15 substituted by (R⁶)_q;

R⁸ is a hydrogen atom, a C₁₋₄ alkyl group, a C₂₋₄ alkenyl group, or a C₂₋₄ alkynyl group;

provided that when R⁷ and R⁸ are bonded to the same atom, they may together form -CH₂CH₂CH₂CH₂-,

20 -CH₂CH₂CH₂CH₂CH₂-, -CH₂CH₂OCH₂CH₂-;

R⁹ is a C₁₋₃ alkoxy group, a C₁₋₃ haloalkoxy group, -CN, -NO₂, -S(O)_rR⁷, -P(O)(OR¹³)₂, -P(S)(OR¹³)₂, -C(O)R⁷, -C(O)OR⁷, or a phenyl group which may be substituted by (R⁶)_q;

25 R¹⁰ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group,

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a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, a C₂₋₇ alkoxyalkyl group, a C₂₋₇ haloalkoxyalkyl group, a C₂₋₇ alkylthioalkyl group, a C₂₋₇ cyanoalkyl group, a C₃₋₈ alkoxycarbonylalkyl group, -C(O)R⁷, -C(O)OR⁷, -C(O)NR⁷R⁸, -S(O)₂NR⁷R⁸, -S(O)₂R⁷, a phenyl group which may be substituted by (R⁶)_q, a benzyl group which may be substituted by (R⁶)_q, or a pyridyl group which may be substituted by (R⁶)_q;

R¹¹ is a hydrogen atom, a C₁₋₄ alkyl group, -C(O)R⁷, or -C(O)OR⁷;

R¹² is a hydrogen atom, a C₁₋₄ alkyl group, a C₁₋₄ haloalkyl group, or a phenyl group which may be substituted by (R⁶)_q;

provided that R¹¹ and R¹² may together form -CH₂CH₂CH₂CH₂-, or -CH₂CH₂CH₂CH₂CH₂-;

R¹³ is a C₁₋₃ alkyl group, or a phenyl group which may be substituted by (R⁶)_q;

R¹⁴ is a C₁₋₄ alkyl group;

R¹⁵ is a C₁₋₁₈ alkyl group;

Each of R¹⁶ and R¹⁷ which are independent of each other, is a C₁₋₄ alkyl group, or R¹⁶ and R¹⁷ may together form -CH₂CH₂CH₂CH₂-, -CH₂CH₂CH₂CH₂CH₂-, or -CH₂CH₂OCH₂CH₂-;

each of R¹⁸ and R¹⁹ which are independent of each other, is a C₁₋₄ alkyl group;

R²⁰ is a C₁₋₄ alkyl group, or a phenyl group which may be substituted by (R⁶)_q;

k is an integer of from 0 to 5, provided that when k

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is from 2 to 5, the plurality of X may be the same or different;

m is an integer of from 0 to 5, provided that when m is from 2 to 5, the plurality of Y may be the same or
5 different;

n is an integer of from 0 to 5, provided that when n is from 2 to 5, the plurality of Z may be the same or different;

p is an integer of from 1 to 3, provided that when p
10 is 2 or 3, the plurality of R⁹ may be the same or different;

q is an integer of from 0 to 4, provided that when q is from 2 or 4, the plurality of R⁶ may be the same or different; and

15 r is an integer of from 0 to 2.

The present invention also provides a pesticide which contains at least one such semicarbazone derivative or its salt as an active ingredient.

Now, specific examples will be given for each
20 substituent disclosed above. The carbon chain in each substituent may be linear, branched or cyclic. In the following description, n- means normal, i- means iso, sec- means secondary, t- means tertiary, and c- means cyclo.

25 The alkyl group may, for example, be a methyl group, an ethyl group, a n-propyl group, an i-propyl group, a n-butyl group, an i-butyl group, a sec-butyl group, a t-

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butyl group, a n-pentyl group, a n-hexyl group, a 1-methylpentyl group, a 2-methylpentyl group, a 3-methylpentyl group, a 4-methylpentyl group, a 1-ethylbutyl group, a 2-ethylbutyl group, a 1,2-
5 dimethylbutyl group, a 1,3-dimethylbutyl group, or a 1-ethyl-i-butyl group.

The alkenyl group may, for example, be an ethenyl group, a 1-propenyl group, a 2-propenyl group, a 2-methyl-2-propenyl group, a 2-butenyl group, a 3-methyl-2-butenyl group, a 3-butenyl group, a 4-pentenyl group, or
10 a 2,3-dimethyl-2-butenyl group.

The alkynyl group may, for example, be an ethynyl group, a 1-propynyl group, a 2-propynyl group, a 2-butynyl group, a 3-butynyl group, or a 4,4-
15 dimethylpentynyl group.

The cycloalkyl group may, for example, be a c-propyl group, a c-butyl group, a c-pentyl group, a c-hexyl group or a 1-methyl-c-propyl group.

The pyridyl group may, for example, be a 2-pyridyl
20 group, a 3-pyridyl group or a 4-pyridyl group.

The alkoxy group may, for example, be a methoxy group, an ethoxy group, a n-propoxy group, an i-propoxy group, a n-butoxy group, an i-butoxy group, a sec-butoxy group or a t-butoxy group.

25 The alkylthio group may, for example, be a methylthio group, an ethylthio group, a n-propylthio group, an i-propylthio group, a n-butylthio group, an i-butylthio

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group, a sec-butylthio group or a t-butylthio group.

The halogen atom may be a fluorine atom, a chlorine atom, a bromine atom or an iodine atom.

W is an oxygen atom or a sulfur atom, preferably an
5 oxygen atom.

Each of X, Y and Z which are independent of one another, may, for example, be a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group,
10 a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, a hydroxyl group, a C₁₋₆ alkoxy group, a C₂₋₆ alkenyloxy group, a C₂₋₆ alkynyloxy group, a C₁₋₆ haloalkoxy group, a C₂₋₆ haloalkenyloxy group, a C₂₋₆ haloalkynyloxy group, a C₃₋₆ cycloalkyloxy group, a C₃₋₆ halocycloalkyloxy group,
15 a C₄₋₇ cycloalkylalkyloxy group, a C₂₋₇ alkoxyalkyloxy group, a C₂₋₇ haloalkoxyalkoxy group, a C₂₋₇ alkylthioalkyloxy group, a C₂₋₇ cyanoalkyloxy group, a C₃₋₈ alkoxycarbonylalkyloxy group, a C₂₋₇ alkylcarbonyloxy group, a C₃₋₇ alkenylcarbonyloxy group, a C₃₋₇ alkynylcarbonyloxy group, a C₂₋₇ haloalkylcarbonyloxy group, a C₃₋₇ haloalkenylcarbonyloxy group, a C₃₋₇ haloalkynylcarbonyloxy group, a C₄₋₇ cycloalkylcarbonyloxy group, a C₄₋₇ halocycloalkylcarbonyloxy group, a C₅₋₈ cycloalkylalkylcarbonyloxy group, a C₃₋₇ alkoxyalkylcarbonyloxy group, a C₃₋₇

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- alkylthioalkylcarbonyloxy group, a C₃₋₇
cyanoalkylcarbonyloxy group, a phenylcarbonyloxy group
which may be substituted by (R⁶)_q, a benzylcarbonyloxy
group which may be substituted by (R⁶)_q, a
5 pyridylcarbonyloxy group which may be substituted by
(R⁶)_q, a C₂₋₇ alkoxy carbonyloxy group, an N-C₁₋₆ alkyl-C₂₋₅
alkylcarbamoxyloxy group, a C₂₋₇ mono-
alkylaminocarbonyloxy group, an N-C₁₋₆ alkyl-C₁₋₄
alkylsulfamoyloxy group, a
10 C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy
group, a C₃₋₆ cycloalkylsulfonyloxy group, a C₃₋₆
halocycloalkylsulfonyloxy group, a C₂₋₆
cyanoalkylsulfonyloxy group, a phenylsulfonyloxy group
which may be substituted by (R⁶)_q, a benzylsulfonyloxy
15 group which may be substituted by (R⁶)_q, a
pyridylsulfonyloxy group which may be substituted by
(R⁶)_q, a phenoxy group which may be substituted by (R⁶)_q,
a benzyloxy group which may be substituted by (R⁶)_q, a
pyridyloxy group which may be substituted by (R⁶)_q,
20 -OCHO, -CN, -N₃, -SCN, -NO₂, -SH, a C₁₋₆ alkylthio group,
a C₂₋₆ alkenylthio group, a C₂₋₆ alkynylthio group, a C₁₋₆
haloalkylthio group, a C₂₋₆ haloalkenylthio group, a C₂₋₆
haloalkynylthio group, a C₃₋₆ cycloalkylthio group, a C₃₋₆
halocycloalkylthio group, a C₄₋₇ cycloalkylalkylthio
25 group, a C₂₋₆ alkoxyalkylthio group, a C₂₋₆
alkylthioalkylthio group, a C₂₋₆ cyanoalkylthio group, a
C₃₋₈ alkoxy carbonylalkylthio group, a phenylthio group

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which may be substituted by $(R^6)_q$, a benzylthio group
which may be substituted by $(R^6)_q$, a pyridylthio group
which may be substituted by $(R^6)_q$, a C_{1-6} alkylsulfinyl
group, a C_{2-6} alkenylsulfinyl group, a C_{2-6}
5 alkynylsulfinyl group, a C_{1-6} haloalkylsulfinyl group, a
 C_{2-6} haloalkenylsulfinyl group, a C_{2-6} haloalkynylsulfinyl
group, a C_{3-6} cycloalkylsulfinyl group, a C_{3-6}
halocycloalkylsulfinyl group, a C_{4-7}
cycloalkylalkylsulfinyl group, a C_{2-6} alkoxyalkylsulfinyl
10 group, a C_{2-6} alkylthioalkylsulfinyl group, a
phenylsulfinyl group which may be substituted by $(R^6)_q$, a
benzylsulfinyl group which may be substituted by $(R^6)_q$, a
pyridylsulfinyl group which may be substituted by $(R^6)_q$,
a C_{1-6} alkylsulfonyl group, a C_{2-6} alkenylsulfonyl group,
15 a C_{2-6} alkynylsulfonyl group, a C_{1-6} haloalkylsulfonyl
group, a C_{2-6} haloalkenylsulfonyl group, a C_{2-6}
haloalkynylsulfonyl group, a C_{3-6} cycloalkylsulfonyl
group, a C_{3-6} halocycloalkylsulfonyl group, a C_{4-7}
cycloalkylalkylsulfonyl group, a C_{2-6} alkoxyalkylsulfonyl
20 group, a C_{2-6} alkylthioalkylsulfonyl group, a C_{2-6}
cyanoalkylsulfonyl group, a C_{3-8}
alkoxycarbonylalkylsulfonyl group, a phenylsulfonyl group
which may be substituted by $(R^6)_q$, a benzylsulfonyl group
which may be substituted by $(R^6)_q$, a pyridylsulfonyl
25 group which may be substituted by $(R^6)_q$, -CHO, a C_{2-7}
alkylcarbonyl group, a C_{3-7} alkenylcarbonyl group, a C_{3-7}
alkynylcarbonyl group, a C_{2-7} haloalkylcarbonyl group, a

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- C₄₋₇ cycloalkylcarbonyl group, a C₄₋₇
halocycloalkylcarbonyl group, a C₃₋₇ alkoxyalkylcarbonyl
group, a C₃₋₇ alkylthioalkylcarbonyl group, a C₃₋₇
cyanoalkylcarbonyl group, a benzoyl group which may be
5 substituted by (R⁶)_q, a benzylcarbonyl group which may be
substituted by (R⁶)_q, a pyridylcarbonyl group which may
be substituted by (R⁶)_q, a C₂₋₇ alkoxy carbonyl group, a
C₂₋₇ haloalkoxy carbonyl group, a C₄₋₇
cycloalkyloxy carbonyl group, a C₄₋₇
10 halocycloalkyloxy carbonyl group, a C₃₋₇
cyanoalkyloxy carbonyl group, a phenoxy carbonyl group
which may be substituted by (R⁶)_q, a benzyloxy carbonyl
group which may be substituted by (R⁶)_q, a
pyridyloxy carbonyl group which may be substituted by
15 (R⁶)_q, an N-C₁₋₆ alkyl-C₂₋₅ alkyl carbamoyl group, a C₂₋₇
mono-alkylaminocarbonyl group, an N-C₁₋₆ haloalkyl-C₂₋₅
alkyl carbamoyl group, a C₂₋₇ monohaloalkylaminocarbonyl
group, a phenylaminocarbonyl group which may be
substituted by (R⁶)_q, a benzylaminocarbonyl group which
20 may be substituted by (R⁶)_q, a pyridylaminocarbonyl group
which may be substituted by (R⁶)_q, an N-C₁₋₆ alkyl-C₁₋₄
alkylsulfamoyl group, a C₁₋₆ monoalkylsulfamoyl group, an
N-C₁₋₆ haloalkyl-C₁₋₄ alkylsulfamoyl group, a C₁₋₆
monohaloalkylsulfamoyl group, a phenylsulfamoyl group
25 which may be substituted by (R⁶)_q, a benzylsulfamoyl
group which may be substituted by (R⁶)_q, a
pyridylsulfamoyl group which may be substituted by (R⁶)_q,

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- an N-C₁₋₆ alkyl-C₁₋₄ alkylamino group, a C₁₋₆ monoalkylamino group, an N-C₁₋₆ haloalkyl-C₁₋₄ alkylamino group, a C₁₋₆ monohaloalkylamino group, a phenylamino group which may be substituted by (R⁶)_q, a benzylamino group which may be substituted by (R⁶)_q, a pyridylamino group which may be substituted by (R⁶)_q, -NHCHO, an N-formyl-C₁₋₄ alkylamino group, a C₂₋₇ alkylcarbonylamino group, a C₂₋₇ haloalkylcarbonylamino group, a C₄₋₇ cycloalkylcarbonylamino group, a C₄₋₇
- 10 halocycloalkylcarbonylamino group, an N-C₁₋₄ alkyl-C₂₋₇ alkylcarbonylamino group, an N-C₁₋₄ alkyl-C₂₋₇ haloalkylcarbonylamino group, an N-C₁₋₄ alkyl-C₄₋₇ cycloalkylcarbonylamino group, an N-C₁₋₄ alkyl-C₄₋₇ halocycloalkylcarbonylamino group, a phenylcarbonylamino
- 15 group which may be substituted by (R⁶)_q, a benzylcarbonylamino group which may be substituted by (R⁶)_q, a pyridylcarbonylamino group which may be substituted by (R⁶)_q, an N-C₁₋₄ alkyl-C₁₋₆ alkylsulfonylamino group, an N-C₁₋₄ alkyl-C₁₋₆
- 20 haloalkylsulfonylamino group, a C₁₋₆ alkylsulfonylamino group, a C₁₋₆ haloalkylsulfonylamino group, a phenylsulfonylamino group which may be substituted by (R⁶)_q, a benzylsulfonylamino group which may be substituted by (R⁶)_q, a pyridylsulfonylamino group which
- 25 may be substituted by (R⁶)_q, a trimethylsilyl group, a phenyldimethylsilyl group, a t-butyl dimethylsilyl group, -SF₅, a phenyl group which may be substituted by (R⁶)_q, a

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pyridyl group which may be substituted by $(R^6)_q$, a C_{2-9} alkoxyalkyl group, a C_{2-9} haloalkoxyalkyl group, a C_{2-9} alkylthioalkyl group, a C_{2-7} cyanoalkyl group, a C_{3-13} alkoxy-carbonylalkyl group, or a benzyl group which may be substituted by $(R^6)_q$. Further, when k, m or n is 2, and two X, Y or Z are adjacent to each other, they may form $-CH=CH-CH=CH-$, $-OCH_2O-$, $-OCF_2O-$, $-OCH_2CH_2O-$, $-OCH_2C(CH_3)_2O-$, $-CF_2CF_2O-$ or $-OCF_2CF_2O-$. Here, the above R^6 may, for example, be a hydrogen atom, a halogen atom, a hydroxyl group, $-CN$, $-NO_2$, a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{1-6} alkoxy group, a C_{1-6} haloalkoxy group, a C_{1-6} alkylthio group, a C_{1-6} haloalkylthio group, a C_{1-6} alkylsulfonyl group, a C_{1-6} haloalkylsulfonyl group, a C_{2-6} alkoxy-carbonyl group, an amino group, or a di- C_{1-6} alkyl-amino group, and q is an integer of from 0 to 4.

X may preferably be, for example, a hydrogen atom, a halogen atom, a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{1-6} alkoxy group, a C_{1-6} haloalkoxy group, a C_{1-6} alkylthio group, a C_{1-6} haloalkylthio group, a C_{1-6} alkylsulfonyl group, or a C_{1-6} haloalkylsulfonyl group. Here, k is an integer of from 0 to 5, preferably 0, 1 or 2. When k is from 2 to 5, the plurality of X may be the same or different.

Y may preferably be, for example, a halogen atom, a cyano group, a nitro group, a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{1-6} alkoxy group, a C_{2-7}

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alkoxycarbonyl group, a C₂₋₇ haloalkoxycarbonyl group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkynylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, or -OCF₂O-, -OCF₂CF₂O-, -CH=CH-CH=CH-, -OCH₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, or -CF₂CF₂O- bridging the adjacent carbon atoms. Here, m is an integer of from 0 to 5, preferably 1 or 2. When m is from 2 to 5, the plurality of Y may be the same or different.

Z may preferably be, for example, a halogen atom, a cyano group, a nitro group, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfinyl group, a C₁₋₆ haloalkylsulfinyl group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, a -SF₅ group, or -OCF₂O-, -OCF₂CF₂O-, -OCF₂CF₂-, -CH=CH-CH=CH-, -OCH₂O-, -OCH₂CH₂O-, or -OCH₂C(CH₃)₂O- bridging the adjacent carbon atoms. Here, n is an integer of from 0 to 5, preferably 1 or 2. When n is from 2 to 5, the plurality of Z may be the same or different.

Each of R¹, R² and R³ which are independent of one another, may, for example, be a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆

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- haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆
halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -CHO,
a C₂₋₇ alkylcarbonyl group, a C₃₋₇ alkenylcarbonyl group,
a C₃₋₇ alkylcarbonyl group, a C₂₋₇ haloalkylcarbonyl
5 group, a C₃₋₇ haloalkenylcarbonyl group, a C₃₋₇
haloalkynylcarbonyl group, a C₄₋₇ cycloalkylcarbonyl
group, a C₄₋₇ halocycloalkylcarbonyl group, a C₅₋₈
cycloalkylalkylcarbonyl group, a C₃₋₇ alkoxyalkylcarbonyl
group, a C₃₋₇ alkylthioalkylcarbonyl group, a C₃₋₇
10 cyanoalkylcarbonyl group, a C₄₋₉
alkoxycarbonylalkylcarbonyl group, a benzoyl group which
may be substituted by (R⁶)_q, a benzylcarbonyl group which
may be substituted by (R⁶)_q, a pyridylcarbonyl group
which may be substituted by (R⁶)_q, a C₂₋₇ alkoxycarbonyl
15 group, a C₃₋₇ alkenyloxycarbonyl group, a C₃₋₇
alkynyloxycarbonyl group, a C₂₋₇ haloalkoxycarbonyl
group, a C₃₋₇ haloalkenyloxycarbonyl group, a C₃₋₇
haloalkynyloxycarbonyl group, a C₄₋₇
cycloalkyloxycarbonyl group, a C₄₋₇
20 halocycloalkyloxycarbonyl group, a C₅₋₈
cycloalkylalkyloxycarbonyl group, a C₃₋₇
alkoxyalkoxycarbonyl group, a C₃₋₇
alkylthioalkoxycarbonyl group, a C₃₋₇
cyanoalkyloxycarbonyl group, a phenoxycarbonyl group
25 which may be substituted by (R⁶)_q, a benzyloxycarbonyl
group which may be substituted by (R⁶)_q, a
pyridyloxycarbonyl group which may be substituted by

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(R⁶)_q, a C₂₋₇ alkyl-thiocarbonyl group, a C₂₋₇ haloalkyl-thiocarbonyl group, a C₂₋₇ alkylthio-carbonyl group, a C₂₋₇ haloalkylthio-carbonyl group, a C₂₋₇ alkylthio-thiocarbonyl group, a C₂₋₇ haloalkylthio-thiocarbonyl group, a C₃₋₈ alkoxy-carbonylcarbonyl group, a C₃₋₈ haloalkoxy-carbonylcarbonyl group, an amino group, a C₁₋₆ alkylamino group, an N-C₁₋₄ alkyl-C₁₋₆ alkylamino group, a C₂₋₇ alkylcarbonylamino group, a di-C₂₋₇ alkylcarbonylamino group, a C₂₋₇ alkoxy-carbonylamino group, a di-C₂₋₇ alkoxy-carbonyl-amino group, a C₂₋₉ alkylideneamino group, a 1-phenyl-C₁₋₅ alkylideneamino group, a di-C₁₋₃ alkoxy-phosphonyl group, a di-phenoxy-phosphonyl group, a di-C₁₋₃ alkoxy-thiophosphonyl group, a di-phenoxy-thiophosphonyl group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfinyl group, a C₁₋₆ haloalkylsulfinyl group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₃₋₈ alkoxy-carbonylalkylsulfonyl group, an N-C₁₋₄ alkyl-C₂₋₁₉ alkoxy-carbonylaminothio group, a di-C₁₋₄ alkyl-aminothio group, a 1-pyrrolidinethio group, a 1-piperidinethio group, a 1-morpholinethio group, a phenyl group which may be substituted by (R⁶)_q, a C₂₋₉ alkoxyalkyl group, a C₂₋₉ haloalkoxyalkyl group, a C₂₋₇ cyanoalkyl group, a C₂₋₁₂ alkylthioalkyl group, a C₃₋₁₃ alkylcarbonylalkyl group, a C₃₋₁₃ alkoxy-carbonylalkyl group, or a benzyl group which may be substituted by (R⁶)_q. Here, the above R⁶ may, for example, be a hydrogen atom, a halogen atom, a hydroxyl

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group, -CN, -NO₂, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₂₋₆ alkoxycarbonyl group, an amino group, or a di-C₁₋₆ alkyl-amino group, and q is preferably an integer of from 0 to 2.

R¹ may, for example, be preferably a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, a C₂₋₉ alkoxyalkyl group, a C₂₋₉ haloalkoxyalkyl group, a C₂₋₇ cyanoalkyl group, a C₂₋₁₂ alkylthioalkyl group, a C₂₋₁₂ alkylcarbonylalkyl group, a C₂₋₁₂ alkoxycarbonylalkyl group, or a benzyl group which may be substituted by (R⁶)_q. Here, R⁶ may, for example, be a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, or a C₁₋₆ haloalkoxy group, and q is preferably an integer of from 0 to 2.

R² may, for example, be preferably a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₉ alkoxyalkyl group, or a C₂₋₇ alkoxycarbonyl group.

R³ may, for example, be preferably a hydrogen atom, a C₁₋₆ alkyl group, -CHO, a C₂₋₇ alkylcarbonyl group, a C₃₋₇ alkenylcarbonyl group, a C₃₋₇ alkynylcarbonyl group, a C₂₋₇ haloalkylcarbonyl group, a C₄₋₇ cycloalkylcarbonyl

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- group, a C₄₋₇ halocycloalkylcarbonyl group, a C₃₋₇ alkoxyalkylcarbonyl group, a C₃₋₇ alkylthioalkylcarbonyl group, a C₃₋₇ cyanoalkylcarbonyl group, a benzoyl group which may be substituted by (R⁶)_q, a benzylcarbonyl group which may be substituted by (R⁶)_q, a pyridylcarbonyl group which may be substituted by (R⁶)_q, a C₂₋₇ alkoxy carbonyl group, a C₂₋₇ haloalkoxy carbonyl group, a C₄₋₇ cycloalkyloxy carbonyl group, a C₄₋₇ halocycloalkyloxy carbonyl group, a C₃₋₇ cyanoalkyloxy carbonyl group, a phenoxycarbonyl group which may be substituted by (R⁶)_q, a benzyloxy carbonyl group which may be substituted by (R⁶)_q, a pyridyloxy carbonyl group which may be substituted by (R⁶)_q, or an amino group. R⁶ may, for example, be a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, or a C₁₋₆ haloalkoxy group, and q is preferably an integer of from 0 to 2.

The following compounds may be mentioned as preferred compounds of the present invention.

- (1) A semicarbazone derivative of the formula (I) or its salt, wherein:

X is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -NO₂, -S(O)_rR⁷, -OS(O)₂R⁷, or -C(O)OR⁷;

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- Y is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -NO₂, -S(O)_rR⁷, -S(O)₂NR⁷R⁸, -OS(O)₂R⁷, or -C(O)OR⁷, provided that when m is 2, and two Y are adjacent to each other, they may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or -OCF₂CF₂O-;
- 10 Z is a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -NO₂, -S(O)_rR⁷, -S(O)₂NR⁷R⁸, -OS(O)₂R⁷, -C(O)OR⁷, or -SF₅, provided that
- 15 when n is 2, and two Z are adjacent to each other, they may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or -OCF₂CF₂O-;
- R¹ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -CHO, -C(O)R⁷, -C(O)OR⁷, -S(O)_rR⁷, -S(O)_rN(R¹⁴)C(O)OR¹⁵, -S(O)_rNR¹⁶R¹⁷, a phenyl
- 20 group which may be substituted by (R⁶)_q, or a C₁₋₆ alkyl group which may be substituted by (R⁹)_p;
- R² is a hydrogen atom, a C₁₋₆ alkyl group, a C₁₋₆

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alkyl group which may be substituted by $(R^9)_p$, or
-C(O)OR⁷;

R³ is a hydrogen atom, a C₁₋₆ alkyl group, -CHO,
-C(O)R⁷, -C(O)OR⁷, -C(O)SR⁷, -NR¹⁰R¹¹, -N=CR¹¹R¹²,
5 -S(O)₂R⁷, -S(O)_rN(R¹⁴)C(O)OR¹⁵, or -S(O)_rNR¹⁶R¹⁷;

each of R⁴ and R⁵ which are independent of each
other, is a hydrogen atom, a C₁₋₆ alkyl group, a C₁₋₆
haloalkyl group, a C₃₋₆ cycloalkyl group, a C₂₋₆
alkoxyalkyl group, a C₂₋₆ alkylthioalkyl group, -C(O)OR⁷,
10 -C(O)NR⁷R⁸, or -S(O)₂NR⁷R⁸;

R⁷ is a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a
C₃₋₆ cycloalkyl group, or a phenyl group which may be
substituted by $(R^6)_q$;

R⁹ is a C₁₋₃ alkoxy group, -CN, or -C(O)OR⁷;

15 R¹⁰ is a hydrogen atom, a C₁₋₆ alkyl group, a C₁₋₆
haloalkyl group, a C₃₋₆ cycloalkyl group, a C₂₋₇
haloalkoxyalkyl group, or a C₃₋₆ halocycloalkyl group;

k is an integer of from 0 to 2, provided that when k
is 2, two X may be the same or different;

20 m is an integer of from 0 to 3, provided that when m
is 2 or 3, the plurality of Y may be the same or
different;

n is an integer of from 1 to 3, provided that when n
is 2 or 3, the plurality of Z may be the same or
25 different; and

p is 1.

(2) A semicarbazone derivative of the above (1) or its

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salt, wherein:

Q is Q-1, Q-2, Q-3, Q-4, Q-5, Q-8, Q-9, Q-10, Q-14, Q-15, Q-16, Q-17, Q-18, Q-22, Q-25, Q-27, Q-28, Q-29, Q-30, Q-31, Q-32 or Q-37.

5 (3) A semicarbazone derivative of the above (1) or its salt, wherein:

J is J-1, J-2, J-7, J-8, J-9, J-10, J-13, J-14, J-15, J-24, J-25, J-26, J-27, J-28, J-30 or J-33.

(4) A semicarbazone derivative of the above (1) or its
10 salt, wherein:

G is G-1.

(5) A semicarbazone derivative of the above (2) or its salt, wherein:

J is J-1, J-2, J-7, J-8, J-9, J-10, J-13, J-14, J-15,
15 J-24, J-25, J-26, J-27, J-28, J-30 or J-33; and

G is G-1.

(6) A semicarbazone derivative of the above (4) or its salt, wherein:

Q is Q-1 or Q-37;

20 m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or different;

n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the substituted position is the 3-position, the 4-position or the 3- and
25 4-positions.

(7) A semicarbazone derivative of the above (4) or its salt, wherein:

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J is J-33;

m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or different, and the substituted position is the 3-position, the 4-position or the 3- and 4-positions; and

n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the substituted position is the 3-position, the 4-position or the 3- and 4-positions.

(8) A semicarbazone derivative of the above (5) or its salt, wherein:

W is an oxygen atom;

X is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, or a C₁₋₆ haloalkylsulfonyl group;

Y is a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, a C₂₋₇ alkoxycarbonyl group, a C₂₋₇ haloalkoxycarbonyl group, -CN, -NO₂, or when m is 2, adjacent two Y may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or -OCF₂CF₂O-;

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Z is a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfinyl group, a C₁₋₆ haloalkylsulfinyl group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, -CN, -NO₂, -SF₅, or when n is 2, adjacent two Z may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or

10 -OCF₂CF₂O-;

m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or different;

n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the substituted position is the 3-position, the 4-position or the 3- and 4-positions;

15

R¹ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkoxyalkyl group, or a C₂₋₆ alkylthioalkyl group;

R² is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkoxyalkyl group, or a -C(O)O-C₁₋₆ alkyl group; and

20

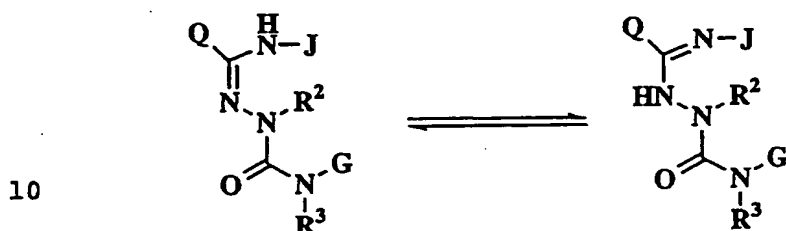
R³ is a hydrogen atom, an amino group, a C₁₋₆ alkyl group, a -C(O)-C₁₋₆ alkyl group or a -C(O)O-C₁₋₆ alkyl group.

The compound of the present invention may have E-form and Z-form isomers. The present invention covers such E-form and Z-form as well as a mixture containing such E-form and Z-form in an optional ratio. Further, when the

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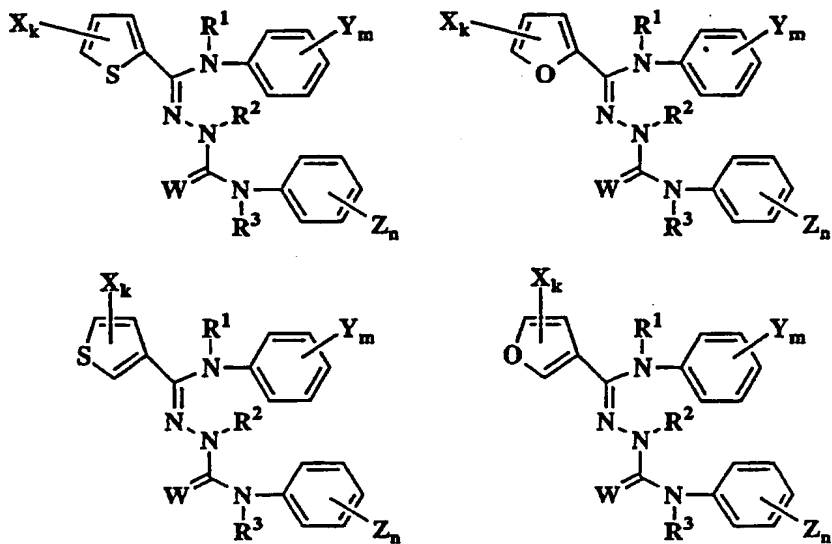
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compound of the present invention has an asymmetric carbon atom, it includes R-form and S-form. Furthermore, when R¹ is a hydrogen atom, the compound of the present invention may be in the form of the following tautomers, and such structures are also covered by the present invention.

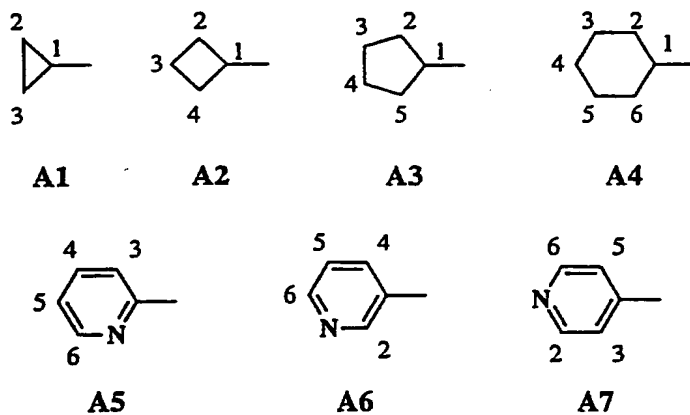


Specific examples of the compound of the present invention include the compounds shown in Tables 1 to 5. However, the compounds in Tables 1 to 5 are merely illustrative, and the present invention is by no means limited to such specific examples.

Table 1



In the Table 1, A1 to A7 represent the following substituents:



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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	2-F
H	H	H	O	5-F	4-F	3-F
H	H	H	O	5-F	4-F	4-F
H	H	H	O	5-F	4-F	2-Cl
H	H	H	O	5-F	4-F	3-Cl
H	H	H	O	5-F	4-F	4-Cl
H	H	H	O	5-F	4-F	3-Br
H	H	H	O	5-F	4-F	4-Br
H	H	H	O	5-F	4-F	4-I
H	H	H	O	5-F	4-F	4-CH ₃
H	H	H	O	5-F	4-F	4-CH ₂ CH ₃
H	H	H	O	5-F	4-F	4-CH(CH ₃) ₂
H	H	H	O	5-F	4-F	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-F	4-C(CH ₃) ₃
H	H	H	O	5-F	4-F	4-CH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-C≡CH
H	H	H	O	5-F	4-F	4-CH ₂ C≡CH
H	H	H	O	5-F	4-F	4-A1
H	H	H	O	5-F	4-F	4-A2
H	H	H	O	5-F	4-F	4-A3
H	H	H	O	5-F	4-F	4-A4
H	H	H	O	5-F	4-F	4-CHF ₂
H	H	H	O	5-F	4-F	4-CH ₂ Br
H	H	H	O	5-F	4-F	4-CH ₂ Cl
H	H	H	O	5-F	4-F	2-CF ₃
H	H	H	O	5-F	4-F	3-CF ₃
H	H	H	O	5-F	4-F	4-CF ₃
H	H	H	O	5-F	4-F	4-CH ₂ CH=CHCl
H	H	H	O	5-F	4-F	4-CH=C(Cl)CF ₃
H	H	H	O	5-F	4-F	4-CH ₂ C≡CBr
H	H	H	O	5-F	4-F	4-(A4-1-Cl)
H	H	H	O	5-F	4-F	4-CH ₂ CN
H	H	H	O	5-F	4-F	4-CH ₂ CH(CH ₃)CN
H	H	H	O	5-F	4-F	4-CH ₂ OH
H	H	H	O	5-F	4-F	4-CH ₂ CO ₂ H
H	H	H	O	5-F	4-F	4-OCH ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CH ₃
H	H	H	O	5-F	4-F	4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-F	4-OC(CH ₃) ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-OCH ₂ C≡CH
H	H	H	O	5-F	4-F	4-O(A4)

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	4-OCHF ₂
H	H	H	O	5-F	4-F	4-OCF ₂ Br
H	H	H	O	5-F	4-F	2-OCF ₃
H	H	H	O	5-F	4-F	3-OCF ₃
H	H	H	O	5-F	4-F	4-OCF ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CF ₃
H	H	H	O	5-F	4-F	4-OCF ₂ CF ₃
H	H	H	O	5-F	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	4-OCF ₂ CHCl ₂
H	H	H	O	5-F	4-F	4-OCF ₂ CHFCl
H	H	H	O	5-F	4-F	4-OCF ₂ CHFBr
H	H	H	O	5-F	4-F	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CH=CHCl
H	H	H	O	5-F	4-F	4-OCH ₂ C≡CBr
H	H	H	O	5-F	4-F	4-O(A4-2,2-Cl ₂)
H	H	H	O	5-F	4-F	4-SCH ₃
H	H	H	O	5-F	4-F	4-SCH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-SCH ₂ C≡CH
H	H	H	O	5-F	4-F	4-S(A4)
H	H	H	O	5-F	4-F	4-SCHF ₂
H	H	H	O	5-F	4-F	4-SCF ₂ Br
H	H	H	O	5-F	4-F	4-SCF ₃
H	H	H	O	5-F	4-F	4-SOCH ₃
H	H	H	O	5-F	4-F	4-SOCH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-SOCH ₂ C≡CH
H	H	H	O	5-F	4-F	4-SO(A4)
H	H	H	O	5-F	4-F	4-SOCF ₃
H	H	H	O	5-F	4-F	4-SO ₂ CH ₃
H	H	H	O	5-F	4-F	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-SO ₂ CH ₂ C≡CH
H	H	H	O	5-F	4-F	4-SO ₂ (A4)
H	H	H	O	5-F	4-F	4-SO ₂ CF ₃
H	H	H	O	5-F	4-F	4-CH ₂ OCH ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	5-F	4-F	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	5-F	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-F	4-CH ₂ SCH ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	5-F	4-F	4-CH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-F	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-F	4-CH ₂ COCH ₃
H	H	H	O	5-F	4-F	4-OCO ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	4-OCOCH ₃
H	H	H	O	5-F	4-F	4-COCH ₃
H	H	H	O	5-F	4-F	4-COCH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-COCH ₂ C≡CH
H	H	H	O	5-F	4-F	4-CO(A3)
H	H	H	O	5-F	4-F	4-COCF ₃
H	H	H	O	5-F	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-F	4-CO ₂ C(CH ₃) ₃
H	H	H	O	5-F	4-F	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-F	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-F	4-NO ₂
H	H	H	O	5-F	4-F	4-CN
H	H	H	O	5-F	4-F	4-OH
H	H	H	O	5-F	4-F	4-CO ₂ H
H	H	H	O	5-F	4-F	4-SCN
H	H	H	O	5-F	4-F	4-OSO ₂ CH ₃
H	H	H	O	5-F	4-F	4-CSCH ₃
H	H	H	O	5-F	4-F	4-NH ₂
H	H	H	O	5-F	4-F	4-N(CH ₃) ₂
H	H	H	O	5-F	4-F	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	5-F	4-F	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	5-F	4-F	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	4-CON(CH ₃) ₂
H	H	H	O	5-F	4-F	4-OCN(CH ₃) ₂
H	H	H	O	5-F	4-F	4-NHCOCH ₃
H	H	H	O	5-F	4-F	4-NHCSCH ₃
H	H	H	O	5-F	4-F	4-SO ₂ N(CH ₃) ₂
H	H	H	O	5-F	4-F	4-Si(CH ₃) ₃
H	H	H	O	5-F	4-F	4-C ₆ H ₅
H	H	H	O	5-F	4-F	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-F	4-OC ₆ H ₅
H	H	H	O	5-F	4-F	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-F	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	5-F	4-F	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	5-F	4-F	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	5-F	4-F	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-F	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-F	4-SO ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-F	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-F	4-CH ₂ C ₆ H ₅

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	5-F	4-F	4-COC ₆ H ₅
H	H	H	O	5-F	4-F	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-F	4-CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-F	4-NHCH ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	4-CH=CH (C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	5-F	4-F	4-N=NC ₆ H ₅
H	H	H	O	5-F	4-F	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	4-NHCON(CH ₃) (C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-F	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-F	4-NHCSNHC ₆ H ₅
H	H	H	O	5-F	4-F	2,4-F ₂
H	H	H	O	5-F	4-F	3,5-F ₂
H	H	H	O	5-F	4-F	2,3-Cl ₂
H	H	H	O	5-F	4-F	2,4-Cl ₂
H	H	H	O	5-F	4-F	2,5-Cl ₂
H	H	H	O	5-F	4-F	2,6-Cl ₂
H	H	H	O	5-F	4-F	3,4-Cl ₂
H	H	H	O	5-F	4-F	3,5-Cl ₂
H	H	H	O	5-F	4-F	3,4-Br ₂
H	H	H	O	5-F	4-F	2,4-I ₂
H	H	H	O	5-F	4-F	2,4-(CH ₃) ₂
H	H	H	O	5-F	4-F	3,4-(OCH ₃) ₂
H	H	H	O	5-F	4-F	2-F-4-Cl
H	H	H	O	5-F	4-F	2-F-4-Br
H	H	H	O	5-F	4-F	2-F-4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-F	2-F-4-OCHF ₂
H	H	H	O	5-F	4-F	2-F-4-OCF ₃
H	H	H	O	5-F	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	2-F-4-OCF ₂ CHFC1
H	H	H	O	5-F	4-F	2-F-4-OCF ₂ CHFCF ₃
H	H	H	O	5-F	4-F	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-F	2-F-4-SO ₂ CF ₂ CHFC1
H	H	H	O	5-F	4-F	2-F-4-O (C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-F	2-F-4-O (A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-F	3-F-4-O (A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-F	2-Cl-4-CF ₃
H	H	H	O	5-F	4-F	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3-Cl-4-CF ₃
H	H	H	O	5-F	4-F	3-F-4-OCF ₃
H	H	H	O	5-F	4-F	3-Cl-4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	3-Cl-4-OCHF ₂
H	H	H	O	5-F	4-F	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-F	3-Cl-4-SCHF ₂
H	H	H	O	5-F	4-F	3-Cl-4-CO ₂ CH ₃
H	H	H	O	5-F	4-F	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	5-F	4-F	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-F	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-F	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	5-F	4-F	3-Br-4-OCF ₃
H	H	H	O	5-F	4-F	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3-CF ₃ -4-Cl
H	H	H	O	5-F	4-F	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3-CF ₃ -4-OCF ₂ CHFBr
H	H	H	O	5-F	4-F	3,4-(CF ₃) ₂
H	H	H	O	5-F	4-F	3,4-(OCF ₃) ₂
H	H	H	O	5-F	4-F	2,3-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-F	2,5-F ₂ -4-Cl
H	H	H	O	5-F	4-F	2,5-F ₂ -4-Br
H	H	H	O	5-F	4-F	2,5-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-F	3,5-F ₂ -4-CF ₃
H	H	H	O	5-F	4-F	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	5-F	4-F	2,6-Cl ₂ -4-CF ₃
H	H	H	O	5-F	4-F	2,3,4-F ₃
H	H	H	O	5-F	4-F	2,4,5-F ₃
H	H	H	O	5-F	4-F	2,3,4-Cl ₃
H	H	H	O	5-F	4-F	2,4,5-Cl ₃
H	H	H	O	5-F	4-F	2,4,6-Cl ₃
H	H	H	O	5-F	4-F	3,4,5-Cl ₃
H	H	H	O	5-F	4-F	2-F-4,5-Cl ₂
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-F	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-F	2-F-3-CF ₃ -5-Cl
H	H	H	O	5-F	4-F	2-F-4-OCF ₃ -5-Cl
H	H	H	O	5-F	4-F	2-F-4-OCF ₂ CHF ₂ -5-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-F	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	5-F	4-F	2,3,4,5-F ₄
H	H	H	O	5-F	4-F	2,3,5,6-F ₄
H	H	H	O	5-F	4-F	2,3,4,5-Cl ₄
H	H	H	O	5-F	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-F	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-F	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	5-F	4-F	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-F	2,3,4,5,6-F ₅
H	H	H	O	5-F	4-F	2,3,5,6-F ₄ -4-CN
H	H	H	O	5-F	4-F	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	5-F	4-F	3-Cl-4-F
H	H	H	O	5-F	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-F	4-(Al-2,2-Cl ₂)
H	H	H	O	5-F	4-F	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-F	4-SOCF ₂ CHF ₂
H	H	H	O	5-F	4-F	4-SO ₂ CHF ₂
H	H	H	O	5-F	4-F	3-OCF ₂ O-4
H	H	H	O	5-F	4-F	3-OCH ₂ O-4
H	H	H	O	5-F	4-F	3-OCF ₂ CF ₂ O-4
H	H	H	O	5-CF ₃	4-F	4-F
H	H	H	O	5-CF ₃	4-F	3-Cl
H	H	H	O	5-CF ₃	4-F	4-Cl
H	H	H	O	5-CF ₃	4-F	4-Br
H	H	H	O	5-CF ₃	4-F	4-I
H	H	H	O	5-CF ₃	4-F	4-CH ₃
H	H	H	O	5-CF ₃	4-F	4-C(CH ₃) ₃
H	H	H	O	5-CF ₃	4-F	4-CHF ₂
H	H	H	O	5-CF ₃	4-F	3-CF ₃
H	H	H	O	5-CF ₃	4-F	4-CF ₃
H	H	H	O	5-CF ₃	4-F	4-OCH ₃
H	H	H	O	5-CF ₃	4-F	4-OCH ₂ CH ₃
H	H	H	O	5-CF ₃	4-F	4-OCHF ₂
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ Br
H	H	H	O	5-CF ₃	4-F	3-OCF ₃
H	H	H	O	5-CF ₃	4-F	4-OCF ₃
H	H	H	O	5-CF ₃	4-F	4-OCH ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ CHFC1
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-SCH ₃

R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-F	4-SCHF ₂
H	H	H	O	5-CF ₃	4-F	4-SCF ₂ Br
H	H	H	O	5-CF ₃	4-F	4-SCF ₃
H	H	H	O	5-CF ₃	4-F	4-SOCH ₃
H	H	H	O	5-CF ₃	4-F	4-SOCF ₃
H	H	H	O	5-CF ₃	4-F	4-SO ₂ CH ₃
H	H	H	O	5-CF ₃	4-F	4-SO ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-F	4-OCO ₂ CH ₃
H	H	H	O	5-CF ₃	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-F	4-OCOCH ₃
H	H	H	O	5-CF ₃	4-F	4-COCH ₃
H	H	H	O	5-CF ₃	4-F	4-COCF ₃
H	H	H	O	5-CF ₃	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-CF ₃	4-F	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-NO ₂
H	H	H	O	5-CF ₃	4-F	4-CN
H	H	H	O	5-CF ₃	4-F	4-OH
H	H	H	O	5-CF ₃	4-F	4-CO ₂ H
H	H	H	O	5-CF ₃	4-F	4-OSO ₂ CH ₃
H	H	H	O	5-CF ₃	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-CF ₃	4-F	4-N(CH ₃) ₂
H	H	H	O	5-CF ₃	4-F	4-Si(CH ₃) ₃
H	H	H	O	5-CF ₃	4-F	4-C ₆ H ₅
H	H	H	O	5-CF ₃	4-F	4-OC ₆ H ₅
H	H	H	O	5-CF ₃	4-F	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-CF ₃	4-F	4-O(A5-5-CF ₃)
H	H	H	O	5-CF ₃	4-F	4-SO ₂ C ₆ H ₅
H	H	H	O	5-CF ₃	4-F	4-CH ₂ C ₆ H ₅
H	H	H	O	5-CF ₃	4-F	4-COC ₆ H ₅
H	H	H	O	5-CF ₃	4-F	2,4-F ₂
H	H	H	O	5-CF ₃	4-F	3,4-Cl ₂
H	H	H	O	5-CF ₃	4-F	3,4-Br ₂
H	H	H	O	5-CF ₃	4-F	2-F-4-Cl
H	H	H	O	5-CF ₃	4-F	2-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-F	3-Cl-4-CF ₃
H	H	H	O	5-CF ₃	4-F	3-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-F	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-F	3-Cl-4-SCHF ₂
H	H	H	O	5-CF ₃	4-F	2,5-F ₂ -4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-F	2-F-4,5-Cl ₂
H	H	H	O	5-CF ₃	4-F	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-F	3,4,5-Cl ₃
H	H	H	O	5-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	5-CF ₃	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-Cl	4-F	4-Cl
H	H	H	O	5-Cl	4-F	4-Br
H	H	H	O	5-Cl	4-F	4-CF ₃
H	H	H	O	5-Cl	4-F	4-OCH ₂ CH ₃
H	H	H	O	5-Cl	4-F	4-OCHF ₂
H	H	H	O	5-Cl	4-F	4-OCF ₂ Br
H	H	H	O	5-Cl	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-F	4-OCF ₃
H	H	H	O	5-Cl	4-F	4-SCHF ₂
H	H	H	O	5-Cl	4-F	4-SCF ₂ Br
H	H	H	O	5-Cl	4-F	4-SCF ₃
H	H	H	O	5-Cl	4-F	4-O(A6-6-Cl)
H	H	H	O	5-Cl	4-F	4-O(A7)
H	H	H	O	5-Cl	4-F	4-O(A5-5-CF ₃)
H	H	H	O	5-Cl	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-Cl	4-F	4-COCF ₃
H	H	H	O	5-Cl	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-Cl	4-F	4-NO ₂
H	H	H	O	5-Cl	4-F	4-CN
H	H	H	O	5-Cl	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-Cl	4-F	3,4-Cl ₂
H	H	H	O	5-Cl	4-F	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-CN	2-F
H	H	H	O	5-F	4-CN	3-F
H	H	H	O	5-F	4-CN	4-F
H	H	H	O	5-F	4-CN	2-Cl
H	H	H	O	5-F	4-CN	3-Cl
H	H	H	O	5-F	4-CN	4-Cl
H	H	H	O	5-F	4-CN	3-Br
H	H	H	O	5-F	4-CN	4-Br
H	H	H	O	5-F	4-CN	4-I
H	H	H	O	5-F	4-CN	4-CH ₃
H	H	H	O	5-F	4-CN	4-CH ₂ CH ₃
H	H	H	O	5-F	4-CN	4-CH(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-CN	4-C(CH ₃) ₃

R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	4-CH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-C≡CH
H	H	H	O	5-F	4-CN	4-CH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-A1
H	H	H	O	5-F	4-CN	4-A2
H	H	H	O	5-F	4-CN	4-A3
H	H	H	O	5-F	4-CN	4-A4
H	H	H	O	5-F	4-CN	4-CHF ₂
H	H	H	O	5-F	4-CN	4-CH ₂ Br
H	H	H	O	5-F	4-CN	4-CH ₂ Cl
H	H	H	O	5-F	4-CN	2-CF ₃
H	H	H	O	5-F	4-CN	3-CF ₃
H	H	H	O	5-F	4-CN	4-CF ₃
H	H	H	O	5-F	4-CN	4-CH ₂ CH=CHCl
H	H	H	O	5-F	4-CN	4-CH=C(Cl)CF ₃
H	H	H	O	5-F	4-CN	4-CH ₂ C≡CBr
H	H	H	O	5-F	4-CN	4-(A4-1-Cl)
H	H	H	O	5-F	4-CN	4-CH ₂ CN
H	H	H	O	5-F	4-CN	4-CH ₂ CH(CH ₃)CN
H	H	H	O	5-F	4-CN	4-CH ₂ OH
H	H	H	O	5-F	4-CN	4-CH ₂ CO ₂ H
H	H	H	O	5-F	4-CN	4-OCH ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CH ₃
H	H	H	O	5-F	4-CN	4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-OC(CH ₃) ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-OCH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-O(A4)
H	H	H	O	5-F	4-CN	4-OCHF ₂
H	H	H	O	5-F	4-CN	4-OCF ₂ Br
H	H	H	O	5-F	4-CN	2-OCF ₃
H	H	H	O	5-F	4-CN	3-OCF ₃
H	H	H	O	5-F	4-CN	4-OCF ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CF ₃
H	H	H	O	5-F	4-CN	4-OCF ₂ CF ₃
H	H	H	O	5-F	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	4-OCF ₂ CHCl ₂
H	H	H	O	5-F	4-CN	4-OCF ₂ CHFC1
H	H	H	O	5-F	4-CN	4-OCF ₂ CHFBr
H	H	H	O	5-F	4-CN	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CH=CHCl
H	H	H	O	5-F	4-CN	4-OCH ₂ C≡CBr

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	4-O(A4-2, 2-Cl ₂)
H	H	H	O	5-F	4-CN	4-SCH ₃
H	H	H	O	5-F	4-CN	4-SCH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-SCH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-S(A4)
H	H	H	O	5-F	4-CN	4-SCHF ₂
H	H	H	O	5-F	4-CN	4-SCF ₂ Br
H	H	H	O	5-F	4-CN	4-SCF ₃
H	H	H	O	5-F	4-CN	4-SOCH ₃
H	H	H	O	5-F	4-CN	4-SOCH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-SOCH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-SO(A4)
H	H	H	O	5-F	4-CN	4-SOCF ₃
H	H	H	O	5-F	4-CN	4-SO ₂ CH ₃
H	H	H	O	5-F	4-CN	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-SO ₂ CH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-SO ₂ (A4)
H	H	H	O	5-F	4-CN	4-SO ₂ CF ₃
H	H	H	O	5-F	4-CN	4-CH ₂ OCH ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	5-F	4-CN	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	5-F	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-CN	4-CH ₂ SCH ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	5-F	4-CN	4-CH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-CN	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-CN	4-CH ₂ COCH ₃
H	H	H	O	5-F	4-CN	4-OCO ₂ CH ₃
H	H	H	O	5-F	4-CN	4-OCOCH ₃
H	H	H	O	5-F	4-CN	4-COCH ₃
H	H	H	O	5-F	4-CN	4-COCH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-COCH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-CO(A3)
H	H	H	O	5-F	4-CN	4-COCF ₃
H	H	H	O	5-F	4-CN	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-CN	4-CO ₂ C(CH ₃) ₃
H	H	H	O	5-F	4-CN	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-CN	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-CN	4-NO ₂
H	H	H	O	5-F	4-CN	4-CN
H	H	H	O	5-F	4-CN	4-OH
H	H	H	O	5-F	4-CN	4-CO ₂ H

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	4-SCN
H	H	H	O	5-F	4-CN	4-OSO ₂ CH ₃
H	H	H	O	5-F	4-CN	4-CSCH ₃
H	H	H	O	5-F	4-CN	4-NH ₂
H	H	H	O	5-F	4-CN	4-N(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	5-F	4-CN	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	5-F	4-CN	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-CON(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-OCN(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-NHCOCH ₃
H	H	H	O	5-F	4-CN	4-NHCSCH ₃
H	H	H	O	5-F	4-CN	4-SO ₂ N(CH ₃) ₂
H	H	H	O	5-F	4-CN	4-Si(CH ₃) ₃
H	H	H	O	5-F	4-CN	4-C ₆ H ₅
H	H	H	O	5-F	4-CN	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-CN	4-OC ₆ H ₅
H	H	H	O	5-F	4-CN	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-CN	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	5-F	4-CN	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	5-F	4-CN	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	5-F	4-CN	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-CN	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-CN	4-SO ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-CN	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-CN	4-CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	5-F	4-CN	4-COC ₆ H ₅
H	H	H	O	5-F	4-CN	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-CN	4-CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-CN	4-NHCH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-CH=CH(C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	5-F	4-CN	4-N=NC ₆ H ₅
H	H	H	O	5-F	4-CN	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	4-NHCON(CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-CN	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-CN	4-NHCSNHC ₆ H ₅
H	H	H	O	5-F	4-CN	2,4-F ₂
H	H	H	O	5-F	4-CN	3,5-F ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	2,3-Cl ₂
H	H	H	O	5-F	4-CN	2,4-Cl ₂
H	H	H	O	5-F	4-CN	2,5-Cl ₂
H	H	H	O	5-F	4-CN	2,6-Cl ₂
H	H	H	O	5-F	4-CN	3,4-Cl ₂
H	H	H	O	5-F	4-CN	3,5-Cl ₂
H	H	H	O	5-F	4-CN	3,4-Br ₂
H	H	H	O	5-F	4-CN	2,4-I ₂
H	H	H	O	5-F	4-CN	2,4-(CH ₃) ₂
H	H	H	O	5-F	4-CN	3,4-(OCH ₃) ₂
H	H	H	O	5-F	4-CN	2-F-4-Cl
H	H	H	O	5-F	4-CN	2-F-4-Br
H	H	H	O	5-F	4-CN	2-F-4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-CN	2-F-4-OCHF ₂
H	H	H	O	5-F	4-CN	2-F-4-OCF ₃
H	H	H	O	5-F	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	2-F-4-OCF ₂ CHFCl
H	H	H	O	5-F	4-CN	2-F-4-OCF ₂ CHFCF ₃
H	H	H	O	5-F	4-CN	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-CN	2-F-4-SO ₂ CF ₂ CHFCl
H	H	H	O	5-F	4-CN	2-F-4-O(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-CN	2-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-CN	3-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-CN	2-Cl-4-CF ₃
H	H	H	O	5-F	4-CN	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3-Cl-4-CF ₃
H	H	H	O	5-F	4-CN	3-F-4-OCF ₃
H	H	H	O	5-F	4-CN	3-Cl-4-OCF ₃
H	H	H	O	5-F	4-CN	3-Cl-4-OCHF ₂
H	H	H	O	5-F	4-CN	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-CN	3-Cl-4-SCHF ₂
H	H	H	O	5-F	4-CN	3-Cl-4-CO ₂ CH ₃
H	H	H	O	5-F	4-CN	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	5-F	4-CN	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-CN	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-CN	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	5-F	4-CN	3-Br-4-OCF ₃
H	H	H	O	5-F	4-CN	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3-CF ₃ -4-Cl
H	H	H	O	5-F	4-CN	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3-CF ₃ -4-OCF ₂ CHFBBr

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	3,4-(CF ₃) ₂
H	H	H	O	5-F	4-CN	3,4-(OCF ₃) ₂
H	H	H	O	5-F	4-CN	2,3-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-CN	2,5-F ₂ -4-Cl
H	H	H	O	5-F	4-CN	2,5-F ₂ -4-Br
H	H	H	O	5-F	4-CN	2,5-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-CN	3,5-F ₂ -4-CF ₃
H	H	H	O	5-F	4-CN	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	5-F	4-CN	2,6-Cl ₂ -4-CF ₃
H	H	H	O	5-F	4-CN	2,3,4-F ₃
H	H	H	O	5-F	4-CN	2,4,5-F ₃
H	H	H	O	5-F	4-CN	2,3,4-Cl ₃
H	H	H	O	5-F	4-CN	2,4,5-Cl ₃
H	H	H	O	5-F	4-CN	2,4,6-Cl ₃
H	H	H	O	5-F	4-CN	3,4,5-Cl ₃
H	H	H	O	5-F	4-CN	2-F-4,5-Cl ₂
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-CN	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-CN	2-F-3-CF ₃ -5-Cl
H	H	H	O	5-F	4-CN	2-F-4-OCF ₃ -5-Cl
H	H	H	O	5-F	4-CN	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	5-F	4-CN	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	5-F	4-CN	2,3,4,5-F ₄
H	H	H	O	5-F	4-CN	2,3,5,6-F ₄
H	H	H	O	5-F	4-CN	2,3,4,5-Cl ₄
H	H	H	O	5-F	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-CN	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-CN	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	5-F	4-CN	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	2,3,4,5,6-F ₅
H	H	H	O	5-F	4-CN	2,3,5,6-F ₄ -4-CN
H	H	H	O	5-F	4-CN	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	5-F	4-CN	3-Cl-4-F
H	H	H	O	5-F	4-CN	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-CN	4-(A1-2,2-Cl ₂)

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-CN	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-CN	4-SOCF ₂ CHF ₂
H	H	H	O	5-F	4-CN	4-SO ₂ CHF ₂
H	H	H	O	5-F	4-CN	3-OCF ₂ O-4
H	H	H	O	5-F	4-CN	3-OCH ₂ O-4
H	H	H	O	5-F	4-CN	3-OCF ₂ CF ₂ O-4
H	H	H	O	5-CF ₃	4-CN	4-F
H	H	H	O	5-CF ₃	4-CN	3-Cl
H	H	H	O	5-CF ₃	4-CN	4-Cl
H	H	H	O	5-CF ₃	4-CN	4-Br
H	H	H	O	5-CF ₃	4-CN	4-I
H	H	H	O	5-CF ₃	4-CN	4-CH ₃
H	H	H	O	5-CF ₃	4-CN	4-C(CH ₃) ₃
H	H	H	O	5-CF ₃	4-CN	4-CHF ₂
H	H	H	O	5-CF ₃	4-CN	3-CF ₃
H	H	H	O	5-CF ₃	4-CN	4-CF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCH ₃
H	H	H	O	5-CF ₃	4-CN	4-OCH ₂ CH ₃
H	H	H	O	5-CF ₃	4-CN	4-OCHF ₂
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ Br
H	H	H	O	5-CF ₃	4-CN	3-OCF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCH ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CHFC1
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-SCH ₃
H	H	H	O	5-CF ₃	4-CN	4-SCHF ₂
H	H	H	O	5-CF ₃	4-CN	4-SCF ₂ Br
H	H	H	O	5-CF ₃	4-CN	4-SCF ₃
H	H	H	O	5-CF ₃	4-CN	4-SOCH ₃
H	H	H	O	5-CF ₃	4-CN	4-SOCF ₃
H	H	H	O	5-CF ₃	4-CN	4-SO ₂ CH ₃
H	H	H	O	5-CF ₃	4-CN	4-SO ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	4-OCO ₂ CH ₃
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCOCH ₃
H	H	H	O	5-CF ₃	4-CN	4-COCH ₃
H	H	H	O	5-CF ₃	4-CN	4-COCF ₃
H	H	H	O	5-CF ₃	4-CN	4-CO ₂ CH ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-CN	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-NO ₂
H	H	H	O	5-CF ₃	4-CN	4-CN
H	H	H	O	5-CF ₃	4-CN	4-OH
H	H	H	O	5-CF ₃	4-CN	4-CO ₂ H
H	H	H	O	5-CF ₃	4-CN	4-OSO ₂ CH ₃
H	H	H	O	5-CF ₃	4-CN	4-OSO ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	4-N(CH ₃) ₂
H	H	H	O	5-CF ₃	4-CN	4-Si(CH ₃) ₃
H	H	H	O	5-CF ₃	4-CN	4-C ₆ H ₅
H	H	H	O	5-CF ₃	4-CN	4-OC ₆ H ₅
H	H	H	O	5-CF ₃	4-CN	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-CF ₃	4-CN	4-O(A5-5-CF ₃)
H	H	H	O	5-CF ₃	4-CN	4-SO ₂ C ₆ H ₅
H	H	H	O	5-CF ₃	4-CN	4-CH ₂ C ₆ H ₅
H	H	H	O	5-CF ₃	4-CN	4-COC ₆ H ₅
H	H	H	O	5-CF ₃	4-CN	2,4-F ₂
H	H	H	O	5-CF ₃	4-CN	3,4-Cl ₂
H	H	H	O	5-CF ₃	4-CN	3,4-Br ₂
H	H	H	O	5-CF ₃	4-CN	2-F-4-Cl
H	H	H	O	5-CF ₃	4-CN	2-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	3-Cl-4-CF ₃
H	H	H	O	5-CF ₃	4-CN	3-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-CN	3-Cl-4-SCHF ₂
H	H	H	O	5-CF ₃	4-CN	2,5-F ₂ -4-OCF ₃
H	H	H	O	5-CF ₃	4-CN	2-F-4,5-Cl ₂
H	H	H	O	5-CF ₃	4-CN	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	3,4,5-Cl ₃
H	H	H	O	5-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	5-CF ₃	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-Cl	4-CN	4-Cl
H	H	H	O	5-Cl	4-CN	4-Br
H	H	H	O	5-Cl	4-CN	4-CF ₃
H	H	H	O	5-Cl	4-CN	4-OCH ₂ CH ₃
H	H	H	O	5-Cl	4-CN	4-OCHF ₂
H	H	H	O	5-Cl	4-CN	4-OCF ₂ Br
H	H	H	O	5-Cl	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-CN	4-OCF ₃
H	H	H	O	5-Cl	4-CN	4-SCHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-Cl	4-CN	4-SCF ₂ Br
H	H	H	O	5-Cl	4-CN	4-SCF ₃
H	H	H	O	5-Cl	4-CN	4-O(A6-6-Cl)
H	H	H	O	5-Cl	4-CN	4-O(A7)
H	H	H	O	5-Cl	4-CN	4-O(A5-5-CF ₃)
H	H	H	O	5-Cl	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-Cl	4-CN	4-COCF ₃
H	H	H	O	5-Cl	4-CN	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-Cl	4-CN	4-NO ₂
H	H	H	O	5-Cl	4-CN	4-CN
H	H	H	O	5-Cl	4-CN	4-OSO ₂ CF ₃
H	H	H	O	5-Cl	4-CN	3,4-Cl ₂
H	H	H	O	5-Cl	4-CN	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	2-F
H	H	H	O	5-F	4-NO ₂	3-F
H	H	H	O	5-F	4-NO ₂	4-F
H	H	H	O	5-F	4-NO ₂	2-Cl
H	H	H	O	5-F	4-NO ₂	3-Cl
H	H	H	O	5-F	4-NO ₂	4-Cl
H	H	H	O	5-F	4-NO ₂	3-Br
H	H	H	O	5-F	4-NO ₂	4-Br
H	H	H	O	5-F	4-NO ₂	4-I
H	H	H	O	5-F	4-NO ₂	4-CH ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-CH(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-C(CH ₃) ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-C≡CH
H	H	H	O	5-F	4-NO ₂	4-CH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-A1
H	H	H	O	5-F	4-NO ₂	4-A2
H	H	H	O	5-F	4-NO ₂	4-A3
H	H	H	O	5-F	4-NO ₂	4-A4
H	H	H	O	5-F	4-NO ₂	4-CHF ₂
H	H	H	O	5-F	4-NO ₂	4-CH ₂ Br
H	H	H	O	5-F	4-NO ₂	4-CH ₂ Cl
H	H	H	O	5-F	4-NO ₂	2-CF ₃
H	H	H	O	5-F	4-NO ₂	3-CF ₃
H	H	H	O	5-F	4-NO ₂	4-CF ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH=CHCl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-NO ₂	4-CH=C(Cl)CF ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ C≡CBr
H	H	H	O	5-F	4-NO ₂	4-(A4-1-Cl)
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CN
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH(CH ₃)CN
H	H	H	O	5-F	4-NO ₂	4-CH ₂ OH
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CO ₂ H
H	H	H	O	5-F	4-NO ₂	4-OCH ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	4-OC(CH ₃) ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-O(A4)
H	H	H	O	5-F	4-NO ₂	4-OCHF ₂
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ Br
H	H	H	O	5-F	4-NO ₂	2-OCF ₃
H	H	H	O	5-F	4-NO ₂	3-OCF ₃
H	H	H	O	5-F	4-NO ₂	4-OCF ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CHCl ₂
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CHFCl
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CHFBr
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH=CHCl
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ C≡CBr
H	H	H	O	5-F	4-NO ₂	4-O(A4-2,2-Cl ₂)
H	H	H	O	5-F	4-NO ₂	4-SCH ₃
H	H	H	O	5-F	4-NO ₂	4-SCH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-SCH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-S(A4)
H	H	H	O	5-F	4-NO ₂	4-SCHF ₂
H	H	H	O	5-F	4-NO ₂	4-SCF ₂ Br
H	H	H	O	5-F	4-NO ₂	4-SCF ₃
H	H	H	O	5-F	4-NO ₂	4-SOCH ₃
H	H	H	O	5-F	4-NO ₂	4-SOCH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-SOCH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-SO(A4)
H	H	H	O	5-F	4-NO ₂	4-SOCF ₃
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-SO ₂ (A4)
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ OCH ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ SCH ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-CH ₂ COCH ₃
H	H	H	O	5-F	4-NO ₂	4-OCO ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-OCOCH ₃
H	H	H	O	5-F	4-NO ₂	4-COCH ₃
H	H	H	O	5-F	4-NO ₂	4-COCH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-COCH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-CO(A3)
H	H	H	O	5-F	4-NO ₂	4-COCF ₃
H	H	H	O	5-F	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-CO ₂ C(CH ₃) ₃
H	H	H	O	5-F	4-NO ₂	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-NO ₂
H	H	H	O	5-F	4-NO ₂	4-CN
H	H	H	O	5-F	4-NO ₂	4-OH
H	H	H	O	5-F	4-NO ₂	4-CO ₂ H
H	H	H	O	5-F	4-NO ₂	4-SCN
H	H	H	O	5-F	4-NO ₂	4-OSO ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-CSCH ₃
H	H	H	O	5-F	4-NO ₂	4-NH ₂
H	H	H	O	5-F	4-NO ₂	4-N(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	5-F	4-NO ₂	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-CON(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	4-OCN(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	4-NHCOCH ₃
H	H	H	O	5-F	4-NO ₂	4-NHCSCH ₃
H	H	H	O	5-F	4-NO ₂	4-SO ₂ N(CH ₃) ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-NO ₂	4-Si(CH ₃) ₃
H	H	H	O	5-F	4-NO ₂	4-C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-NO ₂	4-OC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-NO ₂	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	5-F	4-NO ₂	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	5-F	4-NO ₂	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	5-F	4-NO ₂	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-NO ₂	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-NO ₂	4-SO ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	5-F	4-NO ₂	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-NO ₂	4-CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	5-F	4-NO ₂	4-COC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-NO ₂	4-CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-NHCH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-CH=CH(C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	5-F	4-NO ₂	4-N=NC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-NHCON(CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-NO ₂	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	4-NHCSNHC ₆ H ₅
H	H	H	O	5-F	4-NO ₂	2,4-F ₂
H	H	H	O	5-F	4-NO ₂	3,5-F ₂
H	H	H	O	5-F	4-NO ₂	2,3-Cl ₂
H	H	H	O	5-F	4-NO ₂	2,4-Cl ₂
H	H	H	O	5-F	4-NO ₂	2,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	2,6-Cl ₂
H	H	H	O	5-F	4-NO ₂	3,4-Cl ₂
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	3,4-Br ₂
H	H	H	O	5-F	4-NO ₂	2,4-I ₂
H	H	H	O	5-F	4-NO ₂	2,4-(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	3,4-(OCH ₃) ₂
H	H	H	O	5-F	4-NO ₂	2-F-4-Cl
H	H	H	O	5-F	4-NO ₂	2-F-4-Br
H	H	H	O	5-F	4-NO ₂	2-F-4-OCH(CH ₃) ₂
H	H	H	O	5-F	4-NO ₂	2-F-4-OCHF ₂

R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₃
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₂ CHFC1
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₂ CHFCF ₃
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-NO ₂	2-F-4-SO ₂ CF ₂ CHFC1
H	H	H	O	5-F	4-NO ₂	2-F-4-O(C ₆ H ₄ -4-Cl)
H	H	H	O	5-F	4-NO ₂	2-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-NO ₂	3-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	5-F	4-NO ₂	2-Cl-4-CF ₃
H	H	H	O	5-F	4-NO ₂	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-CF ₃
H	H	H	O	5-F	4-NO ₂	3-F-4-OCF ₃
H	H	H	O	5-F	4-NO ₂	3-Cl-4-OCF ₃
H	H	H	O	5-F	4-NO ₂	3-Cl-4-OCHF ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-NO ₂	3-Cl-4-SCHF ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-CO ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-NO ₂	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-NO ₂	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	5-F	4-NO ₂	3-Br-4-OCF ₃
H	H	H	O	5-F	4-NO ₂	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3-CF ₃ -4-Cl
H	H	H	O	5-F	4-NO ₂	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3-CF ₃ -4-OCF ₂ CHFCBr
H	H	H	O	5-F	4-NO ₂	3,4-(CF ₃) ₂
H	H	H	O	5-F	4-NO ₂	3,4-(OCF ₃) ₂
H	H	H	O	5-F	4-NO ₂	2,3-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-NO ₂	2,5-F ₂ -4-Cl
H	H	H	O	5-F	4-NO ₂	2,5-F ₂ -4-Br
H	H	H	O	5-F	4-NO ₂	2,5-F ₂ -4-OCF ₃
H	H	H	O	5-F	4-NO ₂	3,5-F ₂ -4-CF ₃
H	H	H	O	5-F	4-NO ₂	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	5-F	4-NO ₂	2,6-Cl ₂ -4-CF ₃
H	H	H	O	5-F	4-NO ₂	2,3,4-F ₃
H	H	H	O	5-F	4-NO ₂	2,4,5-F ₃
H	H	H	O	5-F	4-NO ₂	2,3,4-Cl ₃
H	H	H	O	5-F	4-NO ₂	2,4,5-Cl ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-NO ₂	2,4,6-Cl ₃
H	H	H	O	5-F	4-NO ₂	3,4,5-Cl ₃
H	H	H	O	5-F	4-NO ₂	2-F-4,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	5-F	4-NO ₂	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	5-F	4-NO ₂	2-F-3-CF ₃ -5-Cl
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₃ -5-Cl
H	H	H	O	5-F	4-NO ₂	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	5-F	4-NO ₂	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	5-F	4-NO ₂	2,3,4,5-F ₄
H	H	H	O	5-F	4-NO ₂	2,3,5,6-F ₄
H	H	H	O	5-F	4-NO ₂	2,3,4,5-Cl ₄
H	H	H	O	5-F	4-NO ₂	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	5-F	4-NO ₂	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	2,3,4,5,6-F ₅
H	H	H	O	5-F	4-NO ₂	2,3,5,6-F ₄ -4-CN
H	H	H	O	5-F	4-NO ₂	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	5-F	4-NO ₂	3-Cl-4-F
H	H	H	O	5-F	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-(A1-2,2-Cl ₂)
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	5-F	4-NO ₂	4-SOCF ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	4-SO ₂ CHF ₂
H	H	H	O	5-F	4-NO ₂	3-OCF ₂ O-4
H	H	H	O	5-F	4-NO ₂	3-OCH ₂ O-4
H	H	H	O	5-F	4-NO ₂	3-OCF ₂ CF ₂ O-4
H	H	H	O	5-CF ₃	4-NO ₂	4-F
H	H	H	O	5-CF ₃	4-NO ₂	3-Cl
H	H	H	O	5-CF ₃	4-NO ₂	4-Cl
H	H	H	O	5-CF ₃	4-NO ₂	4-Br
H	H	H	O	5-CF ₃	4-NO ₂	4-I
H	H	H	O	5-CF ₃	4-NO ₂	4-CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-C(CH ₃) ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-CHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-NO ₂	3-CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ Br
H	H	H	O	5-CF ₃	4-NO ₂	3-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCH ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ CHFCl
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SCH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SCHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-SCF ₂ Br
H	H	H	O	5-CF ₃	4-NO ₂	4-SCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SOCH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SOCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SO ₂ CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SO ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-OCO ₂ CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OCOCH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-COCH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-COCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-CO ₂ CH ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-NO ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-CN
H	H	H	O	5-CF ₃	4-NO ₂	4-OH
H	H	H	O	5-CF ₃	4-NO ₂	4-CO ₂ H
H	H	H	O	5-CF ₃	4-NO ₂	4-OSO ₂ CH ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-N(CH ₃) ₂
H	H	H	O	5-CF ₃	4-NO ₂	4-Si(CH ₃) ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-C ₆ H ₅
H	H	H	O	5-CF ₃	4-NO ₂	4-OC ₆ H ₅
H	H	H	O	5-CF ₃	4-NO ₂	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	5-CF ₃	4-NO ₂	4-O(A5-5-CF ₃)
H	H	H	O	5-CF ₃	4-NO ₂	4-SO ₂ C ₆ H ₅

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-NO ₂	4-CH ₂ C ₆ H ₅
H	H	H	O	5-CF ₃	4-NO ₂	4-COC ₆ H ₅
H	H	H	O	5-CF ₃	4-NO ₂	2,4-F ₂
H	H	H	O	5-CF ₃	4-NO ₂	3,4-Cl ₂
H	H	H	O	5-CF ₃	4-NO ₂	3,4-Br ₂
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4-Cl
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	3-Cl-4-CF ₃
H	H	H	O	5-CF ₃	4-NO ₂	3-F-4-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	3-Cl-4-SCHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	2,5-F ₂ -4-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4,5-Cl ₂
H	H	H	O	5-CF ₃	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-NO ₂	3,4,5-Cl ₃
H	H	H	O	5-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	5-CF ₃	4-NO ₂	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	5-Cl	4-NO ₂	4-Cl
H	H	H	O	5-Cl	4-NO ₂	4-Br
H	H	H	O	5-Cl	4-NO ₂	4-CF ₃
H	H	H	O	5-Cl	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	5-Cl	4-NO ₂	4-OCHF ₂
H	H	H	O	5-Cl	4-NO ₂	4-OCF ₂ Br
H	H	H	O	5-Cl	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-NO ₂	4-OCF ₃
H	H	H	O	5-Cl	4-NO ₂	4-SCHF ₂
H	H	H	O	5-Cl	4-NO ₂	4-SCF ₂ Br
H	H	H	O	5-Cl	4-NO ₂	4-SCF ₃
H	H	H	O	5-Cl	4-NO ₂	4-O(A6-6-Cl)
H	H	H	O	5-Cl	4-NO ₂	4-O(A7)
H	H	H	O	5-Cl	4-NO ₂	4-O(A5-5-CF ₃)
H	H	H	O	5-Cl	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	5-Cl	4-NO ₂	4-COCF ₃
H	H	H	O	5-Cl	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	5-Cl	4-NO ₂	4-NO ₂
H	H	H	O	5-Cl	4-NO ₂	4-CN
H	H	H	O	5-Cl	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	5-Cl	4-NO ₂	3,4-Cl ₂
H	H	H	O	5-Cl	4-NO ₂	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-NO ₂	2,4-F ₂ -3,5-Cl ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	2-F
H	H	H	O	4-F	4-F	3-F
H	H	H	O	4-F	4-F	4-F
H	H	H	O	4-F	4-F	2-Cl
H	H	H	O	4-F	4-F	3-Cl
H	H	H	O	4-F	4-F	4-Cl
H	H	H	O	4-F	4-F	3-Br
H	H	H	O	4-F	4-F	4-Br
H	H	H	O	4-F	4-F	4-I
H	H	H	O	4-F	4-F	4-CH ₃
H	H	H	O	4-F	4-F	4-CH ₂ CH ₃
H	H	H	O	4-F	4-F	4-CH(CH ₃) ₂
H	H	H	O	4-F	4-F	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-F	4-C(CH ₃) ₃
H	H	H	O	4-F	4-F	4-CH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-C≡CH
H	H	H	O	4-F	4-F	4-CH ₂ C≡CH
H	H	H	O	4-F	4-F	4-A1
H	H	H	O	4-F	4-F	4-A2
H	H	H	O	4-F	4-F	4-A3
H	H	H	O	4-F	4-F	4-A4
H	H	H	O	4-F	4-F	4-CHF ₂
H	H	H	O	4-F	4-F	4-CH ₂ Br
H	H	H	O	4-F	4-F	4-CH ₂ Cl
H	H	H	O	4-F	4-F	2-CF ₃
H	H	H	O	4-F	4-F	3-CF ₃
H	H	H	O	4-F	4-F	4-CF ₃
H	H	H	O	4-F	4-F	4-CH ₂ CH=CHCl
H	H	H	O	4-F	4-F	4-CH=C(Cl)CF ₃
H	H	H	O	4-F	4-F	4-CH ₂ C≡CBr
H	H	H	O	4-F	4-F	4-(A4-1-Cl)
H	H	H	O	4-F	4-F	4-CH ₂ CN
H	H	H	O	4-F	4-F	4-CH ₂ CH(CH ₃)CN
H	H	H	O	4-F	4-F	4-CH ₂ OH
H	H	H	O	4-F	4-F	4-CH ₂ CO ₂ H
H	H	H	O	4-F	4-F	4-OCH ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CH ₃
H	H	H	O	4-F	4-F	4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-F	4-OC(CH ₃) ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-OCH ₂ C≡CH
H	H	H	O	4-F	4-F	4-O(A4)

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	4-OCHF ₂
H	H	H	O	4-F	4-F	4-OCF ₂ Br
H	H	H	O	4-F	4-F	2-OCF ₃
H	H	H	O	4-F	4-F	3-OCF ₃
H	H	H	O	4-F	4-F	4-OCF ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CF ₃
H	H	H	O	4-F	4-F	4-OCF ₂ CF ₃
H	H	H	O	4-F	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	4-OCF ₂ CHCl ₂
H	H	H	O	4-F	4-F	4-OCF ₂ CHFCl
H	H	H	O	4-F	4-F	4-OCF ₂ CHFBBr
H	H	H	O	4-F	4-F	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CH=CHCl
H	H	H	O	4-F	4-F	4-OCH ₂ C≡CBr
H	H	H	O	4-F	4-F	4-O(A4-2, 2-Cl ₂)
H	H	H	O	4-F	4-F	4-SCH ₃
H	H	H	O	4-F	4-F	4-SCH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-SCH ₂ C≡CH
H	H	H	O	4-F	4-F	4-S(A4)
H	H	H	O	4-F	4-F	4-SCHF ₂
H	H	H	O	4-F	4-F	4-SCF ₂ Br
H	H	H	O	4-F	4-F	4-SCF ₃
H	H	H	O	4-F	4-F	4-SOCH ₃
H	H	H	O	4-F	4-F	4-SOCH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-SOCH ₂ C≡CH
H	H	H	O	4-F	4-F	4-SO(A4)
H	H	H	O	4-F	4-F	4-SOCF ₃
H	H	H	O	4-F	4-F	4-SO ₂ CH ₃
H	H	H	O	4-F	4-F	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-SO ₂ CH ₂ C≡CH
H	H	H	O	4-F	4-F	4-SO ₂ (A4)
H	H	H	O	4-F	4-F	4-SO ₂ CF ₃
H	H	H	O	4-F	4-F	4-CH ₂ OCH ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	4-F	4-F	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	4-F	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-F	4-CH ₂ SCH ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	4-F	4-F	4-CH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-F	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-F	4-CH ₂ COCH ₃
H	H	H	O	4-F	4-F	4-OCO ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	4-OCOCH ₃
H	H	H	O	4-F	4-F	4-COCH ₃
H	H	H	O	4-F	4-F	4-COCH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-COCH ₂ C≡CH
H	H	H	O	4-F	4-F	4-CO(A3)
H	H	H	O	4-F	4-F	4-COCF ₃
H	H	H	O	4-F	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-F	4-CO ₂ C(CH ₃) ₃
H	H	H	O	4-F	4-F	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-F	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-F	4-NO ₂
H	H	H	O	4-F	4-F	4-CN
H	H	H	O	4-F	4-F	4-OH
H	H	H	O	4-F	4-F	4-CO ₂ H
H	H	H	O	4-F	4-F	4-SCN
H	H	H	O	4-F	4-F	4-OSO ₂ CH ₃
H	H	H	O	4-F	4-F	4-CSCH ₃
H	H	H	O	4-F	4-F	4-NH ₂
H	H	H	O	4-F	4-F	4-N(CH ₃) ₂
H	H	H	O	4-F	4-F	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	4-F	4-F	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	4-F	4-F	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	4-CON(CH ₃) ₂
H	H	H	O	4-F	4-F	4-OCON(CH ₃) ₂
H	H	H	O	4-F	4-F	4-NHCOCH ₃
H	H	H	O	4-F	4-F	4-NHCSCH ₃
H	H	H	O	4-F	4-F	4-SO ₂ N(CH ₃) ₂
H	H	H	O	4-F	4-F	4-Si(CH ₃) ₃
H	H	H	O	4-F	4-F	4-C ₆ H ₅
H	H	H	O	4-F	4-F	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-F	4-OC ₆ H ₅
H	H	H	O	4-F	4-F	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-F	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	4-F	4-F	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	4-F	4-F	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	4-F	4-F	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-F	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-F	4-SO ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-F	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-F	4-CH ₂ C ₆ H ₅

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	4-F	4-F	4-COC ₆ H ₅
H	H	H	O	4-F	4-F	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-F	4-CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-F	4-NHCH ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	4-CH=CH(C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	4-F	4-F	4-N=NC ₆ H ₅
H	H	H	O	4-F	4-F	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	4-NHCON(CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-F	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-F	4-NHCSNHC ₆ H ₅
H	H	H	O	4-F	4-F	2,4-F ₂
H	H	H	O	4-F	4-F	3,4-F ₂
H	H	H	O	4-F	4-F	2,3-Cl ₂
H	H	H	O	4-F	4-F	2,4-Cl ₂
H	H	H	O	4-F	4-F	2,5-Cl ₂
H	H	H	O	4-F	4-F	2,6-Cl ₂
H	H	H	O	4-F	4-F	3,4-Cl ₂
H	H	H	O	4-F	4-F	3,5-Cl ₂
H	H	H	O	4-F	4-F	3,4-Br ₂
H	H	H	O	4-F	4-F	2,4-I ₂
H	H	H	O	4-F	4-F	2,4-(CH ₃) ₂
H	H	H	O	4-F	4-F	3,4-(OCH ₃) ₂
H	H	H	O	4-F	4-F	2-F-4-Cl
H	H	H	O	4-F	4-F	2-F-4-Br
H	H	H	O	4-F	4-F	2-F-4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-F	2-F-4-OCHF ₂
H	H	H	O	4-F	4-F	2-F-4-OCF ₃
H	H	H	O	4-F	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	2-F-4-OCF ₂ CHFC1
H	H	H	O	4-F	4-F	2-F-4-OCF ₂ CHFCF ₃
H	H	H	O	4-F	4-F	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-F	2-F-4-SO ₂ CF ₂ CHFC1
H	H	H	O	4-F	4-F	2-F-4-O(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-F	2-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-F	3-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-F	2-Cl-4-CF ₃
H	H	H	O	4-F	4-F	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3-Cl-4-CF ₃
H	H	H	O	4-F	4-F	3-F-4-OCF ₃
H	H	H	O	4-F	4-F	3-Cl-4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	3-Cl-4-OCHF ₂
H	H	H	O	4-F	4-F	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-F	3-Cl-4-SCHF ₂
H	H	H	O	4-F	4-F	3-Cl-4-CO ₂ CH ₃
H	H	H	O	4-F	4-F	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	4-F	4-F	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-F	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-F	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	4-F	4-F	3-Br-4-OCF ₃
H	H	H	O	4-F	4-F	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3-CF ₃ -4-Cl
H	H	H	O	4-F	4-F	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3-CF ₃ -4-OCF ₂ CHFBr
H	H	H	O	4-F	4-F	3,4-(CF ₃) ₂
H	H	H	O	4-F	4-F	3,4-(OCF ₃) ₂
H	H	H	O	4-F	4-F	2,3-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-F	2,5-F ₂ -4-Cl
H	H	H	O	4-F	4-F	2,5-F ₂ -4-Br
H	H	H	O	4-F	4-F	2,5-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-F	3,5-F ₂ -4-CF ₃
H	H	H	O	4-F	4-F	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	4-F	4-F	2,6-Cl ₂ -4-CF ₃
H	H	H	O	4-F	4-F	2,3,4-F ₃
H	H	H	O	4-F	4-F	2,4,5-F ₃
H	H	H	O	4-F	4-F	2,3,4-Cl ₃
H	H	H	O	4-F	4-F	2,4,5-Cl ₃
H	H	H	O	4-F	4-F	2,4,6-Cl ₃
H	H	H	O	4-F	4-F	3,4,5-Cl ₃
H	H	H	O	4-F	4-F	2-F-4,5-Cl ₂
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-F	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-F	2-F-3-CF ₃ -5-Cl
H	H	H	O	4-F	4-F	2-F-4-OCF ₃ -5-Cl
H	H	H	O	4-F	4-F	2-F-4-OCF ₂ CHF ₂ -5-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-F	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	4-F	4-F	2,3,4,5-F ₄
H	H	H	O	4-F	4-F	2,3,5,6-F ₄
H	H	H	O	4-F	4-F	2,3,4,5-Cl ₄
H	H	H	O	4-F	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-F	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-F	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	4-F	4-F	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	2,3,4,5,6-F ₅
H	H	H	O	4-F	4-F	2,3,5,6-F ₄ -4-CN
H	H	H	O	4-F	4-F	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	4-F	4-F	3-Cl-4-F
H	H	H	O	4-F	4-F	4-OSO ₂ CF ₃
H	H	H	O	4-F	4-F	4-(Al-2,2-Cl ₂)
H	H	H	O	4-F	4-F	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-F	4-SOCF ₂ CHF ₂
H	H	H	O	4-F	4-F	4-SO ₂ CHF ₂
H	H	H	O	4-F	4-F	3-OCF ₂ O-4
H	H	H	O	4-F	4-F	3-OCH ₂ O-4
H	H	H	O	4-F	4-F	3-OCF ₂ CF ₂ O-4
H	H	H	O	4-CF ₃	4-F	4-F
H	H	H	O	4-CF ₃	4-F	3-Cl
H	H	H	O	4-CF ₃	4-F	4-Cl
H	H	H	O	4-CF ₃	4-F	4-Br
H	H	H	O	4-CF ₃	4-F	4-I
H	H	H	O	4-CF ₃	4-F	4-CH ₃
H	H	H	O	4-CF ₃	4-F	4-C(CH ₃) ₃
H	H	H	O	4-CF ₃	4-F	4-CHF ₂
H	H	H	O	4-CF ₃	4-F	3-CF ₃
H	H	H	O	4-CF ₃	4-F	4-CF ₃
H	H	H	O	4-CF ₃	4-F	4-OCH ₃
H	H	H	O	4-CF ₃	4-F	4-OCH ₂ CH ₃
H	H	H	O	4-CF ₃	4-F	4-OCHF ₂
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ Br
H	H	H	O	4-CF ₃	4-F	3-OCF ₃
H	H	H	O	4-CF ₃	4-F	4-OCF ₃
H	H	H	O	4-CF ₃	4-F	4-OCH ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ CHFC1
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-SCH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-CF ₃	4-F	4-SCHF ₂
H	H	H	O	4-CF ₃	4-F	4-SCF ₂ Br
H	H	H	O	4-CF ₃	4-F	4-SCF ₃
H	H	H	O	4-CF ₃	4-F	4-SOCH ₃
H	H	H	O	4-CF ₃	4-F	4-SOCF ₃
H	H	H	O	4-CF ₃	4-F	4-SO ₂ CH ₃
H	H	H	O	4-CF ₃	4-F	4-SO ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-F	4-OCO ₂ CH ₃
H	H	H	O	4-CF ₃	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-F	4-OCOCH ₃
H	H	H	O	4-CF ₃	4-F	4-COCH ₃
H	H	H	O	4-CF ₃	4-F	4-COCF ₃
H	H	H	O	4-CF ₃	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-CF ₃	4-F	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-NO ₂
H	H	H	O	4-CF ₃	4-F	4-CN
H	H	H	O	4-CF ₃	4-F	4-OH
H	H	H	O	4-CF ₃	4-F	4-CO ₂ H
H	H	H	O	4-CF ₃	4-F	4-OSO ₂ CH ₃
H	H	H	O	4-CF ₃	4-F	4-OSO ₂ CF ₃
H	H	H	O	4-CF ₃	4-F	4-N(CH ₃) ₂
H	H	H	O	4-CF ₃	4-F	4-Si(CH ₃) ₃
H	H	H	O	4-CF ₃	4-F	4-C ₆ H ₅
H	H	H	O	4-CF ₃	4-F	4-OC ₆ H ₅
H	H	H	O	4-CF ₃	4-F	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-CF ₃	4-F	4-O(A5-5-CF ₃)
H	H	H	O	4-CF ₃	4-F	4-SO ₂ C ₆ H ₅
H	H	H	O	4-CF ₃	4-F	4-CH ₂ C ₆ H ₅
H	H	H	O	4-CF ₃	4-F	4-COC ₆ H ₅
H	H	H	O	4-CF ₃	4-F	2,4-F ₂
H	H	H	O	4-CF ₃	4-F	3,4-Cl ₂
H	H	H	O	4-CF ₃	4-F	3,4-Br ₂
H	H	H	O	4-CF ₃	4-F	2-F-4-Cl
H	H	H	O	4-CF ₃	4-F	2-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-F	3-Cl-4-CF ₃
H	H	H	O	4-CF ₃	4-F	3-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-F	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-F	3-Cl-4-SCHF ₂
H	H	H	O	4-CF ₃	4-F	2,5-F ₂ -4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-CF ₃	4-F	2-F-4,5-Cl ₂
H	H	H	O	4-CF ₃	4-F	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-F	3,4,5-Cl ₃
H	H	H	O	4-CF ₃	4-F	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	4-CF ₃	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-Cl	4-F	4-Cl
H	H	H	O	4-Cl	4-F	4-Br
H	H	H	O	4-Cl	4-F	4-CF ₃
H	H	H	O	4-Cl	4-F	4-OCH ₂ CH ₃
H	H	H	O	4-Cl	4-F	4-OCHF ₂
H	H	H	O	4-Cl	4-F	4-OCF ₂ Br
H	H	H	O	4-Cl	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-F	4-OCF ₃
H	H	H	O	4-Cl	4-F	4-SCHF ₂
H	H	H	O	4-Cl	4-F	4-SCF ₂ Br
H	H	H	O	4-Cl	4-F	4-SCF ₃
H	H	H	O	4-Cl	4-F	4-O(A6-6-Cl)
H	H	H	O	4-Cl	4-F	4-O(A7)
H	H	H	O	4-Cl	4-F	4-O(A5-5-CF ₃)
H	H	H	O	4-Cl	4-F	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-Cl	4-F	4-COCF ₃
H	H	H	O	4-Cl	4-F	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-Cl	4-F	4-NO ₂
H	H	H	O	4-Cl	4-F	4-CN
H	H	H	O	4-Cl	4-F	4-OSO ₂ CF ₃
H	H	H	O	4-Cl	4-F	3,4-Cl ₂
H	H	H	O	4-Cl	4-F	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-F	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-CN	2-F
H	H	H	O	4-F	4-CN	3-F
H	H	H	O	4-F	4-CN	4-F
H	H	H	O	4-F	4-CN	2-Cl
H	H	H	O	4-F	4-CN	3-Cl
H	H	H	O	4-F	4-CN	4-Cl
H	H	H	O	4-F	4-CN	3-Br
H	H	H	O	4-F	4-CN	4-Br
H	H	H	O	4-F	4-CN	4-I
H	H	H	O	4-F	4-CN	4-CH ₃
H	H	H	O	4-F	4-CN	4-CH ₂ CH ₃
H	H	H	O	4-F	4-CN	4-CH(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-CN	4-C(CH ₃) ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-CN	4-CH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-C≡CH
H	H	H	O	4-F	4-CN	4-CH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-A1
H	H	H	O	4-F	4-CN	4-A2
H	H	H	O	4-F	4-CN	4-A3
H	H	H	O	4-F	4-CN	4-A4
H	H	H	O	4-F	4-CN	4-CHF ₂
H	H	H	O	4-F	4-CN	4-CH ₂ Br
H	H	H	O	4-F	4-CN	4-CH ₂ Cl
H	H	H	O	4-F	4-CN	2-CF ₃
H	H	H	O	4-F	4-CN	3-CF ₃
H	H	H	O	4-F	4-CN	4-CF ₃
H	H	H	O	4-F	4-CN	4-CH ₂ CH=CHCl
H	H	H	O	4-F	4-CN	4-CH=C(Cl)CF ₃
H	H	H	O	4-F	4-CN	4-CH ₂ C≡CBr
H	H	H	O	4-F	4-CN	4-(A4-1-Cl)
H	H	H	O	4-F	4-CN	4-CH ₂ CN
H	H	H	O	4-F	4-CN	4-CH ₂ CH(CH ₃)CN
H	H	H	O	4-F	4-CN	4-CH ₂ OH
H	H	H	O	4-F	4-CN	4-CH ₂ CO ₂ H
H	H	H	O	4-F	4-CN	4-OCH ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CH ₃
H	H	H	O	4-F	4-CN	4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-OC(CH ₃) ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-OCH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-O(A4)
H	H	H	O	4-F	4-CN	4-OCHF ₂
H	H	H	O	4-F	4-CN	4-OCF ₂ Br
H	H	H	O	4-F	4-CN	2-OCF ₃
H	H	H	O	4-F	4-CN	3-OCF ₃
H	H	H	O	4-F	4-CN	4-OCF ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CF ₃
H	H	H	O	4-F	4-CN	4-OCF ₂ CF ₃
H	H	H	O	4-F	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	4-OCF ₂ CHCl ₂
H	H	H	O	4-F	4-CN	4-OCF ₂ CHFCl
H	H	H	O	4-F	4-CN	4-OCF ₂ CHBr
H	H	H	O	4-F	4-CN	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CH=CHCl
H	H	H	O	4-F	4-CN	4-OCH ₂ C≡CBr

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R ¹	R ²	R ³	W	X _x	Y _m	Z _n
H	H	H	O	4-F	4-CN	4-O(A4-2,2-Cl ₂)
H	H	H	O	4-F	4-CN	4-SCH ₃
H	H	H	O	4-F	4-CN	4-SCH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-SCH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-S(A4)
H	H	H	O	4-F	4-CN	4-SCHF ₂
H	H	H	O	4-F	4-CN	4-SCF ₂ Br
H	H	H	O	4-F	4-CN	4-SCF ₃
H	H	H	O	4-F	4-CN	4-SOCH ₃
H	H	H	O	4-F	4-CN	4-SOCH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-SOCH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-SO(A4)
H	H	H	O	4-F	4-CN	4-SOCF ₃
H	H	H	O	4-F	4-CN	4-SO ₂ CH ₃
H	H	H	O	4-F	4-CN	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-SO ₂ CH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-SO ₂ (A4)
H	H	H	O	4-F	4-CN	4-SO ₂ CF ₃
H	H	H	O	4-F	4-CN	4-CH ₂ OCH ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	4-F	4-CN	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	4-F	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-CN	4-CH ₂ SCH ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	4-F	4-CN	4-CH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-CN	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-CN	4-CH ₂ COCH ₃
H	H	H	O	4-F	4-CN	4-OCO ₂ CH ₃
H	H	H	O	4-F	4-CN	4-OCOCH ₃
H	H	H	O	4-F	4-CN	4-COCH ₃
H	H	H	O	4-F	4-CN	4-COCH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-COCH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-CO(A3)
H	H	H	O	4-F	4-CN	4-COCF ₃
H	H	H	O	4-F	4-CN	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-CN	4-CO ₂ C(CH ₃) ₃
H	H	H	O	4-F	4-CN	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-CN	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-CN	4-NO ₂
H	H	H	O	4-F	4-CN	4-CN
H	H	H	O	4-F	4-CN	4-OH
H	H	H	O	4-F	4-CN	4-CO ₂ H

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-CN	4-SCN
H	H	H	O	4-F	4-CN	4-OSO ₂ CH ₃
H	H	H	O	4-F	4-CN	4-CSCH ₃
H	H	H	O	4-F	4-CN	4-NH ₂
H	H	H	O	4-F	4-CN	4-N(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	4-F	4-CN	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	4-F	4-CN	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-CON(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-OCN(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-NHCOCH ₃
H	H	H	O	4-F	4-CN	4-NHCSCH ₃
H	H	H	O	4-F	4-CN	4-SO ₂ N(CH ₃) ₂
H	H	H	O	4-F	4-CN	4-Si(CH ₃) ₃
H	H	H	O	4-F	4-CN	4-C ₆ H ₅
H	H	H	O	4-F	4-CN	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-CN	4-OC ₆ H ₅
H	H	H	O	4-F	4-CN	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-CN	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	4-F	4-CN	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	4-F	4-CN	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	4-F	4-CN	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-CN	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-CN	4-SO ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-CN	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-CN	4-CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	4-F	4-CN	4-COC ₆ H ₅
H	H	H	O	4-F	4-CN	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-CN	4-CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-CN	4-NHCH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-CH=CH(C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	4-F	4-CN	4-N=NC ₆ H ₅
H	H	H	O	4-F	4-CN	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	4-NHCON(CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-CN	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-CN	4-NHCSNHC ₆ H ₅
H	H	H	O	4-F	4-CN	2,4-F ₂
H	H	H	O	4-F	4-CN	3,5-F ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-CN	2,3-Cl ₂
H	H	H	O	4-F	4-CN	2,4-Cl ₂
H	H	H	O	4-F	4-CN	2,5-Cl ₂
H	H	H	O	4-F	4-CN	2,6-Cl ₂
H	H	H	O	4-F	4-CN	3,4-Cl ₂
H	H	H	O	4-F	4-CN	3,5-Cl ₂
H	H	H	O	4-F	4-CN	3,4-Br ₂
H	H	H	O	4-F	4-CN	2,4-I ₂
H	H	H	O	4-F	4-CN	2,4-(CH ₃) ₂
H	H	H	O	4-F	4-CN	3,4-(OCH ₃) ₂
H	H	H	O	4-F	4-CN	2-F-4-Cl
H	H	H	O	4-F	4-CN	2-F-4-Br
H	H	H	O	4-F	4-CN	2-F-4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-CN	2-F-4-OCHF ₂
H	H	H	O	4-F	4-CN	2-F-4-OCF ₃
H	H	H	O	4-F	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	2-F-4-OCF ₂ CHFC1
H	H	H	O	4-F	4-CN	2-F-4-OCF ₂ CHFCF ₃
H	H	H	O	4-F	4-CN	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-CN	2-F-4-SO ₂ CF ₂ CHFC1
H	H	H	O	4-F	4-CN	2-F-4-O(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-CN	2-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-CN	3-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-CN	2-Cl-4-CF ₃
H	H	H	O	4-F	4-CN	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3-Cl-4-CF ₃
H	H	H	O	4-F	4-CN	3-F-4-OCF ₃
H	H	H	O	4-F	4-CN	3-Cl-4-OCF ₃
H	H	H	O	4-F	4-CN	3-Cl-4-OCHF ₂
H	H	H	O	4-F	4-CN	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-CN	3-Cl-4-SCHF ₂
H	H	H	O	4-F	4-CN	3-Cl-4-CO ₂ CH ₃
H	H	H	O	4-F	4-CN	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	4-F	4-CN	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-CN	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-CN	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	4-F	4-CN	3-Br-4-OCF ₃
H	H	H	O	4-F	4-CN	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3-CF ₃ -4-Cl
H	H	H	O	4-F	4-CN	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3-CF ₃ -4-OCF ₂ CHFCBr

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-CN	3,4-(CF ₃) ₂
H	H	H	O	4-F	4-CN	3,4-(OCF ₃) ₂
H	H	H	O	4-F	4-CN	2,3-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-CN	2,5-F ₂ -4-Cl
H	H	H	O	4-F	4-CN	2,5-F ₂ -4-Br
H	H	H	O	4-F	4-CN	2,5-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-CN	3,5-F ₂ -4-CF ₃
H	H	H	O	4-F	4-CN	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	4-F	4-CN	2,6-Cl ₂ -4-CF ₃
H	H	H	O	4-F	4-CN	2,3,4-F ₃
H	H	H	O	4-F	4-CN	2,4,5-F ₃
H	H	H	O	4-F	4-CN	2,3,4-Cl ₃
H	H	H	O	4-F	4-CN	2,4,5-Cl ₃
H	H	H	O	4-F	4-CN	2,4,6-Cl ₃
H	H	H	O	4-F	4-CN	3,4,5-Cl ₃
H	H	H	O	4-F	4-CN	2-F-4,5-Cl ₂
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-CN	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-CN	2-F-3-CF ₃ -5-Cl
H	H	H	O	4-F	4-CN	2-F-4-OCF ₃ -5-Cl
H	H	H	O	4-F	4-CN	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	4-F	4-CN	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	4-F	4-CN	2,3,4,5-F ₄
H	H	H	O	4-F	4-CN	2,3,5,6-F ₄
H	H	H	O	4-F	4-CN	2,3,4,5-Cl ₄
H	H	H	O	4-F	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-CN	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-CN	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	4-F	4-CN	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	2,3,4,5,6-F ₅
H	H	H	O	4-F	4-CN	2,3,5,6-F ₄ -4-CN
H	H	H	O	4-F	4-CN	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	4-F	4-CN	3-Cl-4-F
H	H	H	O	4-F	4-CN	4-OSO ₂ CF ₃
H	H	H	O	4-F	4-CN	4-(A1-2,2-Cl ₂)

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-CN	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-CN	4-SOCF ₂ CHF ₂
H	H	H	O	4-F	4-CN	4-SO ₂ CHF ₂
H	H	H	O	4-F	4-CN	3-OCF ₂ O-4
H	H	H	O	4-F	4-CN	3-OCH ₂ O-4
H	H	H	O	4-F	4-CN	3-OCF ₂ CF ₂ O-4
H	H	H	O	4-CF ₃	4-CN	4-F
H	H	H	O	4-CF ₃	4-CN	3-Cl
H	H	H	O	4-CF ₃	4-CN	4-Cl
H	H	H	O	4-CF ₃	4-CN	4-Br
H	H	H	O	4-CF ₃	4-CN	4-I
H	H	H	O	4-CF ₃	4-CN	4-CH ₃
H	H	H	O	4-CF ₃	4-CN	4-C(CH ₃) ₃
H	H	H	O	4-CF ₃	4-CN	4-CHF ₂
H	H	H	O	4-CF ₃	4-CN	3-CF ₃
H	H	H	O	4-CF ₃	4-CN	4-CF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCH ₃
H	H	H	O	4-CF ₃	4-CN	4-OCH ₂ CH ₃
H	H	H	O	4-CF ₃	4-CN	4-OCHF ₂
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ Br
H	H	H	O	4-CF ₃	4-CN	3-OCF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCH ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ CHFC1
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-SCH ₃
H	H	H	O	4-CF ₃	4-CN	4-SCHF ₂
H	H	H	O	4-CF ₃	4-CN	4-SCF ₂ Br
H	H	H	O	4-CF ₃	4-CN	4-SCF ₃
H	H	H	O	4-CF ₃	4-CN	4-SOCH ₃
H	H	H	O	4-CF ₃	4-CN	4-SOCF ₃
H	H	H	O	4-CF ₃	4-CN	4-SO ₂ CH ₃
H	H	H	O	4-CF ₃	4-CN	4-SO ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-CN	4-OCO ₂ CH ₃
H	H	H	O	4-CF ₃	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCOCH ₃
H	H	H	O	4-CF ₃	4-CN	4-COCH ₃
H	H	H	O	4-CF ₃	4-CN	4-COCF ₃
H	H	H	O	4-CF ₃	4-CN	4-CO ₂ CH ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-CF ₃	4-CN	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-NO ₂
H	H	H	O	4-CF ₃	4-CN	4-CN
H	H	H	O	4-CF ₃	4-CN	4-OH
H	H	H	O	4-CF ₃	4-CN	4-CO ₂ H
H	H	H	O	4-CF ₃	4-CN	4-OSO ₂ CH ₃
H	H	H	O	4-CF ₃	4-CN	4-OSO ₂ CF ₃
H	H	H	O	4-CF ₃	4-CN	4-N(CH ₃) ₂
H	H	H	O	4-CF ₃	4-CN	4-Si(CH ₃) ₃
H	H	H	O	4-CF ₃	4-CN	4-C ₆ H ₅
H	H	H	O	4-CF ₃	4-CN	4-OC ₆ H ₅
H	H	H	O	4-CF ₃	4-CN	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-CF ₃	4-CN	4-O(A5-5-CF ₃)
H	H	H	O	4-CF ₃	4-CN	4-SO ₂ C ₆ H ₅
H	H	H	O	4-CF ₃	4-CN	4-CH ₂ C ₆ H ₅
H	H	H	O	4-CF ₃	4-CN	4-COC ₆ H ₅
H	H	H	O	4-CF ₃	4-CN	2,4-F ₂
H	H	H	O	4-CF ₃	4-CN	3,4-Cl ₂
H	H	H	O	4-CF ₃	4-CN	3,4-Br ₂
H	H	H	O	4-CF ₃	4-CN	2-F-4-Cl
H	H	H	O	4-CF ₃	4-CN	2-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-CN	3-Cl-4-CF ₃
H	H	H	O	4-CF ₃	4-CN	3-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-CN	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-CN	3-Cl-4-SCHF ₂
H	H	H	O	4-CF ₃	4-CN	2,5-F ₂ -4-OCF ₃
H	H	H	O	4-CF ₃	4-CN	2-F-4,5-Cl ₂
H	H	H	O	4-CF ₃	4-CN	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-CN	3,4,5-Cl ₃
H	H	H	O	4-CF ₃	4-CN	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	4-CF ₃	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-Cl	4-CN	4-Cl
H	H	H	O	4-Cl	4-CN	4-Br
H	H	H	O	4-Cl	4-CN	4-CF ₃
H	H	H	O	4-Cl	4-CN	4-OCH ₂ CH ₃
H	H	H	O	4-Cl	4-CN	4-OCHF ₂
H	H	H	O	4-Cl	4-CN	4-OCF ₂ Br
H	H	H	O	4-Cl	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-CN	4-OCF ₃
H	H	H	O	4-Cl	4-CN	4-SCHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-Cl	4-CN	4-SCF ₂ Br
H	H	H	O	4-Cl	4-CN	4-SCF ₃
H	H	H	O	4-Cl	4-CN	4-O(A6-6-Cl)
H	H	H	O	4-Cl	4-CN	4-O(A7)
H	H	H	O	4-Cl	4-CN	4-O(A5-5-CF ₃)
H	H	H	O	4-Cl	4-CN	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-Cl	4-CN	4-COCF ₃
H	H	H	O	4-Cl	4-CN	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-Cl	4-CN	4-NO ₂
H	H	H	O	4-Cl	4-CN	4-CN
H	H	H	O	4-Cl	4-CN	4-OSO ₂ CF ₃
H	H	H	O	4-Cl	4-CN	3,4-Cl ₂
H	H	H	O	4-Cl	4-CN	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-CN	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	2-F
H	H	H	O	4-F	4-NO ₂	3-F
H	H	H	O	4-F	4-NO ₂	4-F
H	H	H	O	4-F	4-NO ₂	2-Cl
H	H	H	O	4-F	4-NO ₂	3-Cl
H	H	H	O	4-F	4-NO ₂	4-Cl
H	H	H	O	4-F	4-NO ₂	3-Br
H	H	H	O	4-F	4-NO ₂	4-Br
H	H	H	O	4-F	4-NO ₂	4-I
H	H	H	O	4-F	4-NO ₂	4-CH ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-CH(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-C(CH ₃) ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-C≡CH
H	H	H	O	4-F	4-NO ₂	4-CH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-A1
H	H	H	O	4-F	4-NO ₂	4-A2
H	H	H	O	4-F	4-NO ₂	4-A3
H	H	H	O	4-F	4-NO ₂	4-A4
H	H	H	O	4-F	4-NO ₂	4-CHF ₂
H	H	H	O	4-F	4-NO ₂	4-CH ₂ Br
H	H	H	O	4-F	4-NO ₂	4-CH ₂ Cl
H	H	H	O	4-F	4-NO ₂	2-CF ₃
H	H	H	O	4-F	4-NO ₂	3-CF ₃
H	H	H	O	4-F	4-NO ₂	4-CF ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH=CHCl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-NO ₂	4-CH=C(Cl)CF ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ C≡CBr
H	H	H	O	4-F	4-NO ₂	4-(A4-1-Cl)
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CN
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH(CH ₃)CN
H	H	H	O	4-F	4-NO ₂	4-CH ₂ OH
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CO ₂ H
H	H	H	O	4-F	4-NO ₂	4-OCH ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	4-OC(CH ₃) ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-O(A4)
H	H	H	O	4-F	4-NO ₂	4-OCHF ₂
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ Br
H	H	H	O	4-F	4-NO ₂	2-OCF ₃
H	H	H	O	4-F	4-NO ₂	3-OCF ₃
H	H	H	O	4-F	4-NO ₂	4-OCF ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CHCl ₂
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CHFC1
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CHFBr
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH=CHCl
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ C≡CBr
H	H	H	O	4-F	4-NO ₂	4-O(A4-2,2-Cl ₂)
H	H	H	O	4-F	4-NO ₂	4-SCH ₃
H	H	H	O	4-F	4-NO ₂	4-SCH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-SCH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-S(A4)
H	H	H	O	4-F	4-NO ₂	4-SCHF ₂
H	H	H	O	4-F	4-NO ₂	4-SCF ₂ Br
H	H	H	O	4-F	4-NO ₂	4-SCF ₃
H	H	H	O	4-F	4-NO ₂	4-SOCH ₃
H	H	H	O	4-F	4-NO ₂	4-SOCH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-SOCH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-SO(A4)
H	H	H	O	4-F	4-NO ₂	4-SOCF ₃
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CH ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-SO ₂ (A4)
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ OCH ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH ₂ OCH ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ OCH ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ SCH ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH ₂ SCH ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-CH ₂ COCH ₃
H	H	H	O	4-F	4-NO ₂	4-OCO ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-OCOCH ₃
H	H	H	O	4-F	4-NO ₂	4-COCH ₃
H	H	H	O	4-F	4-NO ₂	4-COCH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-COCH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-CO(A3)
H	H	H	O	4-F	4-NO ₂	4-COCF ₃
H	H	H	O	4-F	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-CO ₂ C(CH ₃) ₃
H	H	H	O	4-F	4-NO ₂	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CO ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-NO ₂
H	H	H	O	4-F	4-NO ₂	4-CN
H	H	H	O	4-F	4-NO ₂	4-OH
H	H	H	O	4-F	4-NO ₂	4-CO ₂ H
H	H	H	O	4-F	4-NO ₂	4-SCN
H	H	H	O	4-F	4-NO ₂	4-OSO ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-CSCH ₃
H	H	H	O	4-F	4-NO ₂	4-NH ₂
H	H	H	O	4-F	4-NO ₂	4-N(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	4-N(CH ₃)CH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	4-N(CH ₃)CH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	4-N(CH ₃)CH ₂ C≡CH
H	H	H	O	4-F	4-NO ₂	4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-CON(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	4-OCN(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	4-NHCOCH ₃
H	H	H	O	4-F	4-NO ₂	4-NHCSCH ₃
H	H	H	O	4-F	4-NO ₂	4-SO ₂ N(CH ₃) ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-NO ₂	4-Si(CH ₃) ₃
H	H	H	O	4-F	4-NO ₂	4-C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-NO ₂	4-OC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-NO ₂	4-O(C ₆ H ₄ -4-OCF ₃)
H	H	H	O	4-F	4-NO ₂	4-O(C ₆ H ₃ -2,4-F ₂)
H	H	H	O	4-F	4-NO ₂	4-O(C ₆ H ₃ -3,5-Cl ₂)
H	H	H	O	4-F	4-NO ₂	3-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-NO ₂	4-S(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-NO ₂	4-SO ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-NH(C ₆ H ₃ -2-Cl-4-CF ₃)
H	H	H	O	4-F	4-NO ₂	4-N(CH ₂ CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-NO ₂	4-CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-CF ₂ (C ₆ H ₄ -4-Br)
H	H	H	O	4-F	4-NO ₂	4-COC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-NO ₂	4-CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-NHCH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-CH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-CH=CH(C ₆ H ₃ -2,4-Cl ₂)
H	H	H	O	4-F	4-NO ₂	4-N=NC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-NHCON(CH ₃)(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-NO ₂	4-OCH ₂ CH ₂ OC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	4-NHCSNHC ₆ H ₅
H	H	H	O	4-F	4-NO ₂	2,4-F ₂
H	H	H	O	4-F	4-NO ₂	3,5-F ₂
H	H	H	O	4-F	4-NO ₂	2,3-Cl ₂
H	H	H	O	4-F	4-NO ₂	2,4-Cl ₂
H	H	H	O	4-F	4-NO ₂	2,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	2,6-Cl ₂
H	H	H	O	4-F	4-NO ₂	3,4-Cl ₂
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	3,4-Br ₂
H	H	H	O	4-F	4-NO ₂	2,4-I ₂
H	H	H	O	4-F	4-NO ₂	2,4-(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	3,4-(OCH ₃) ₂
H	H	H	O	4-F	4-NO ₂	2-F-4-Cl
H	H	H	O	4-F	4-NO ₂	2-F-4-Br
H	H	H	O	4-F	4-NO ₂	2-F-4-OCH(CH ₃) ₂
H	H	H	O	4-F	4-NO ₂	2-F-4-OCHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₃
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₂ CHFCl
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₂ CHFCl
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-NO ₂	2-F-4-SO ₂ CF ₂ CHFCl
H	H	H	O	4-F	4-NO ₂	2-F-4-O(C ₆ H ₄ -4-Cl)
H	H	H	O	4-F	4-NO ₂	2-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-NO ₂	3-F-4-O(A5-3-Cl-5-CF ₃)
H	H	H	O	4-F	4-NO ₂	2-Cl-4-CF ₃
H	H	H	O	4-F	4-NO ₂	2-Cl-4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-CF ₃
H	H	H	O	4-F	4-NO ₂	3-F-4-OCF ₃
H	H	H	O	4-F	4-NO ₂	3-Cl-4-OCF ₃
H	H	H	O	4-F	4-NO ₂	3-Cl-4-OCHF ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-NO ₂	3-Cl-4-SCHF ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-CO ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	3-Cl-4-CO ₂ CH(CH ₂ F) ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-NO ₂	3-Cl-4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-NO ₂	3-Cl-4-NH(A5-5-CF ₃)
H	H	H	O	4-F	4-NO ₂	3-Br-4-OCF ₃
H	H	H	O	4-F	4-NO ₂	3-CH ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3-CF ₃ -4-Cl
H	H	H	O	4-F	4-NO ₂	3-CF ₃ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3-CF ₃ -4-OCF ₂ CHFBBr
H	H	H	O	4-F	4-NO ₂	3,4-(CF ₃) ₂
H	H	H	O	4-F	4-NO ₂	3,4-(OCF ₃) ₂
H	H	H	O	4-F	4-NO ₂	2,3-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-NO ₂	2,5-F ₂ -4-Cl
H	H	H	O	4-F	4-NO ₂	2,5-F ₂ -4-Br
H	H	H	O	4-F	4-NO ₂	2,5-F ₂ -4-OCF ₃
H	H	H	O	4-F	4-NO ₂	3,5-F ₂ -4-CF ₃
H	H	H	O	4-F	4-NO ₂	2,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	2,5-Cl ₂ -4-O(A5-3,5-Cl ₂)
H	H	H	O	4-F	4-NO ₂	2,6-Cl ₂ -4-CF ₃
H	H	H	O	4-F	4-NO ₂	2,3,4-F ₃
H	H	H	O	4-F	4-NO ₂	2,4,5-F ₃
H	H	H	O	4-F	4-NO ₂	2,3,4-Cl ₃
H	H	H	O	4-F	4-NO ₂	2,4,5-Cl ₃

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R ¹	R ²	R ³	W	X _x	Y _m	Z _n
H	H	H	O	4-F	4-NO ₂	2,4,6-Cl ₃
H	H	H	O	4-F	4-NO ₂	3,4,5-Cl ₃
H	H	H	O	4-F	4-NO ₂	2-F-4,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-O(A5-5-CF ₃)
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-OCH ₂ CH=CH ₂
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHFOCF ₃
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-SCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-N(CH ₃)CH ₂ CH ₂ CH ₃
H	H	H	O	4-F	4-NO ₂	3,5-Cl ₂ -4-N(CH ₃)CH ₂ C ₆ H ₅
H	H	H	O	4-F	4-NO ₂	2-F-3-CF ₃ -5-Cl
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₃ -5-Cl
H	H	H	O	4-F	4-NO ₂	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	4-F	4-NO ₂	2-CF ₃ -4,6-(NO ₂) ₂
H	H	H	O	4-F	4-NO ₂	2,3,4,5-F ₄
H	H	H	O	4-F	4-NO ₂	2,3,5,6-F ₄
H	H	H	O	4-F	4-NO ₂	2,3,4,5-Cl ₄
H	H	H	O	4-F	4-NO ₂	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	2,6-F ₂ -3,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	2,3,5-F ₃ -4-OCF ₃
H	H	H	O	4-F	4-NO ₂	2-F-3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	2,3,4,5,6-F ₅
H	H	H	O	4-F	4-NO ₂	2,3,5,6-F ₄ -4-CN
H	H	H	O	4-F	4-NO ₂	2,4,6-F ₃ -3,5-Cl ₂
H	H	H	O	4-F	4-NO ₂	3-Cl-4-F
H	H	H	O	4-F	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-(A1-2,2-Cl ₂)
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CF ₂ CF ₂ CF ₃
H	H	H	O	4-F	4-NO ₂	4-SOCF ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	4-SO ₂ CHF ₂
H	H	H	O	4-F	4-NO ₂	3-OCF ₂ O-4
H	H	H	O	4-F	4-NO ₂	3-OCH ₂ O-4
H	H	H	O	4-F	4-NO ₂	3-OCF ₂ CF ₂ O-4
H	H	H	O	4-CF ₃	4-NO ₂	4-F
H	H	H	O	4-CF ₃	4-NO ₂	3-Cl
H	H	H	O	4-CF ₃	4-NO ₂	4-Cl
H	H	H	O	4-CF ₃	4-NO ₂	4-Br
H	H	H	O	4-CF ₃	4-NO ₂	4-I
H	H	H	O	4-CF ₃	4-NO ₂	4-CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-C(CH ₃) ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-CHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-CF ₃	4-NO ₂	3-CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ Br
H	H	H	O	4-CF ₃	4-NO ₂	3-OCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCH ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ CHFCl
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ CF ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SCH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SCHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-SCF ₂ Br
H	H	H	O	4-CF ₃	4-NO ₂	4-SCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SOCH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SOCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SO ₂ CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SO ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-SO ₂ CF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-OCO ₂ CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OCOCH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-COCH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-COCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-CO ₂ CH ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-NO ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-CN
H	H	H	O	4-CF ₃	4-NO ₂	4-OH
H	H	H	O	4-CF ₃	4-NO ₂	4-CO ₂ H
H	H	H	O	4-CF ₃	4-NO ₂	4-OSO ₂ CH ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-N(CH ₃) ₂
H	H	H	O	4-CF ₃	4-NO ₂	4-Si(CH ₃) ₃
H	H	H	O	4-CF ₃	4-NO ₂	4-C ₆ H ₅
H	H	H	O	4-CF ₃	4-NO ₂	4-OC ₆ H ₅
H	H	H	O	4-CF ₃	4-NO ₂	4-O(C ₆ H ₄ -4-CF ₃)
H	H	H	O	4-CF ₃	4-NO ₂	4-O(A5-5-CF ₃)
H	H	H	O	4-CF ₃	4-NO ₂	4-SO ₂ C ₆ H ₅

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-CF ₃	4-NO ₂	4-CH ₂ C ₆ H ₅
H	H	H	O	4-CF ₃	4-NO ₂	4-COC ₆ H ₅
H	H	H	O	4-CF ₃	4-NO ₂	2,4-F ₂
H	H	H	O	4-CF ₃	4-NO ₂	3,4-Cl ₂
H	H	H	O	4-CF ₃	4-NO ₂	3,4-Br ₂
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4-Cl
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	3-Cl-4-CF ₃
H	H	H	O	4-CF ₃	4-NO ₂	3-F-4-OCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	3-Cl-4-OCF ₂ CHFOCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	3-Cl-4-SCHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	2,5-F ₂ -4-OCF ₃
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4,5-Cl ₂
H	H	H	O	4-CF ₃	4-NO ₂	3,5-Cl ₂ -4-OCF ₂ CHF ₂
H	H	H	O	4-CF ₃	4-NO ₂	3,4,5-Cl ₃
H	H	H	O	4-CF ₃	4-NO ₂	2-F-4-OCF ₂ CHF ₂ -5-Cl
H	H	H	O	4-CF ₃	4-NO ₂	2,4-F ₂ -3,5-Cl ₂
H	H	H	O	4-Cl	4-NO ₂	4-Cl
H	H	H	O	4-Cl	4-NO ₂	4-Br
H	H	H	O	4-Cl	4-NO ₂	4-CF ₃
H	H	H	O	4-Cl	4-NO ₂	4-OCH ₂ CH ₃
H	H	H	O	4-Cl	4-NO ₂	4-OCHF ₂
H	H	H	O	4-Cl	4-NO ₂	4-OCF ₂ Br
H	H	H	O	4-Cl	4-NO ₂	4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-NO ₂	4-OCF ₃
H	H	H	O	4-Cl	4-NO ₂	4-SCHF ₂
H	H	H	O	4-Cl	4-NO ₂	4-SCF ₂ Br
H	H	H	O	4-Cl	4-NO ₂	4-SCF ₃
H	H	H	O	4-Cl	4-NO ₂	4-O(A6-6-Cl)
H	H	H	O	4-Cl	4-NO ₂	4-O(A7)
H	H	H	O	4-Cl	4-NO ₂	4-O(A5-5-CF ₃)
H	H	H	O	4-Cl	4-NO ₂	4-OCF ₂ CHFOCF ₃
H	H	H	O	4-Cl	4-NO ₂	4-COCF ₃
H	H	H	O	4-Cl	4-NO ₂	4-CO ₂ CH ₂ CH ₃
H	H	H	O	4-Cl	4-NO ₂	4-NO ₂
H	H	H	O	4-Cl	4-NO ₂	4-CN
H	H	H	O	4-Cl	4-NO ₂	4-OSO ₂ CF ₃
H	H	H	O	4-Cl	4-NO ₂	3,4-Cl ₂
H	H	H	O	4-Cl	4-NO ₂	3-Cl-4-OCF ₂ CHF ₂
H	H	H	O	4-Cl	4-NO ₂	2,4-F ₂ -3,5-Cl ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	H	H	4-Cl
H	H	H	O	H	H	4-Br
H	H	H	O	H	H	4-CF ₃
H	H	H	O	H	H	4-OCHF ₂
H	H	H	O	H	H	4-OCF ₂ Br
H	H	H	O	H	H	4-OCF ₂ CHF ₂
H	H	H	O	H	H	4-OCF ₃
H	H	H	O	H	H	4-SCF ₃
H	H	H	O	H	H	4-OSO ₂ CF ₃
H	H	H	O	H	H	3,4-Cl ₂
H	H	H	O	H	4-F	4-Cl
H	H	H	O	H	4-F	4-Br
H	H	H	O	H	4-F	4-CF ₃
H	H	H	O	H	4-F	4-OCHF ₂
H	H	H	O	H	4-F	4-OCF ₂ Br
H	H	H	O	H	4-F	4-OCF ₂ CHF ₂
H	H	H	O	H	4-F	4-OCF ₃
H	H	H	O	H	4-F	4-SCF ₃
H	H	H	O	H	4-F	4-OSO ₂ CF ₃
H	H	H	O	H	4-F	3,4-Cl ₂
H	H	H	O	H	4-CN	4-Cl
H	H	H	O	H	4-CN	4-Br
H	H	H	O	H	4-CN	4-CF ₃
H	H	H	O	H	4-CN	4-OCHF ₂
H	H	H	O	H	4-CN	4-OCF ₂ Br
H	H	H	O	H	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	H	4-CN	4-OCF ₃
H	H	H	O	H	4-CN	4-SCF ₃
H	H	H	O	H	4-CN	4-OSO ₂ CF ₃
H	H	H	O	H	4-CN	3,4-Cl ₂
H	H	H	O	H	4-Cl	4-Cl
H	H	H	O	H	4-Cl	4-Br
H	H	H	O	H	4-Cl	4-CF ₃
H	H	H	O	H	4-Cl	4-OCHF ₂
H	H	H	O	H	4-Cl	4-OCF ₂ Br
H	H	H	O	H	4-Cl	4-OCF ₂ CHF ₂
H	H	H	O	H	4-Cl	4-OCF ₃
H	H	H	O	H	4-Cl	4-SCF ₃
H	H	H	O	H	4-Cl	4-OSO ₂ CF ₃
H	H	H	O	H	4-Cl	3,4-Cl ₂
H	H	H	O	H	4-CF ₃	4-Cl
H	H	H	O	H	4-CF ₃	4-Br

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	H	4-CF ₃	4-CF ₃
H	H	H	O	H	4-CF ₃	4-OCHF ₂
H	H	H	O	H	4-CF ₃	4-OCF ₂ Br
H	H	H	O	H	4-CF ₃	4-OCF ₂ CHF ₂
H	H	H	O	H	4-CF ₃	4-OCF ₃
H	H	H	O	H	4-CF ₃	4-SCF ₃
H	H	H	O	H	4-CF ₃	4-OSO ₂ CF ₃
H	H	H	O	H	4-CF ₃	3,4-Cl ₂
H	H	H	O	H	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	H	4-OSO ₂ CF ₃	4-Br
H	H	H	O	H	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	H	4-OSO ₂ CF ₃	4-OCHF ₂
H	H	H	O	H	4-OSO ₂ CF ₃	4-OCF ₂ Br
H	H	H	O	5-F	4-OSO ₂ CF ₃	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-F	4-OSO ₂ CF ₃	4-SCF ₃
H	H	H	O	5-F	4-OSO ₂ CF ₃	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-OSO ₂ CF ₃	3,4-Cl ₂
H	H	H	O	5-F	4-Cl	4-Cl
H	H	H	O	5-F	4-Cl	4-Br
H	H	H	O	5-F	4-Cl	4-CF ₃
H	H	H	O	5-F	4-Cl	4-OCHF ₂
H	H	H	O	5-F	4-Cl	4-OCF ₂ Br
H	H	H	O	5-F	4-Cl	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-Cl	4-OCF ₃
H	H	H	O	5-F	4-Cl	4-SCF ₃
H	H	H	O	5-F	4-Cl	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-Cl	3,4-Cl ₂
H	H	H	O	5-F	4-OCF ₃	4-Cl
H	H	H	O	5-F	4-OCF ₃	4-Br
H	H	H	O	5-F	4-OCF ₃	4-CF ₃
H	H	H	O	5-F	4-OCF ₃	4-OCHF ₂
H	H	H	O	5-F	4-OCF ₃	4-OCF ₂ Br
H	H	H	O	5-F	4-OCF ₃	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-OCF ₃	4-OCF ₃
H	H	H	O	5-F	4-OCF ₃	4-SCF ₃
H	H	H	O	5-F	4-OCF ₃	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-OCF ₃	3,4-Cl ₂
H	H	H	O	5-F	4-OCHF ₂	4-Cl
H	H	H	O	5-F	4-OCHF ₂	4-Br
H	H	H	O	5-F	4-OCHF ₂	4-CF ₃
H	H	H	O	5-F	4-OCHF ₂	4-OCHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	4-OCHF ₂	4-OCF ₂ Br
H	H	H	O	5-F	4-OCHF ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-F	4-OCHF ₂	4-SCF ₃
H	H	H	O	5-F	4-OCHF ₂	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-OCHF ₂	3,4-Cl ₂
H	H	H	O	5-F	4-Br	4-Cl
H	H	H	O	5-F	4-Br	4-Br
H	H	H	O	5-F	4-Br	4-CF ₃
H	H	H	O	5-F	4-Br	4-OCHF ₂
H	H	H	O	5-F	4-Br	4-OCF ₂ Br
H	H	H	O	5-F	4-Br	4-OCF ₂ CHF ₂
H	H	H	O	5-F	4-Br	4-OCF ₃
H	H	H	O	5-F	4-Br	4-SCF ₃
H	H	H	O	5-F	4-Br	4-OSO ₂ CF ₃
H	H	H	O	5-F	4-Br	3,4-Cl ₂
H	H	H	O	5-Br	4-F	4-Cl
H	H	H	O	5-Br	4-F	4-Br
H	H	H	O	5-Br	4-F	4-CF ₃
H	H	H	O	5-Br	4-F	4-OCHF ₂
H	H	H	O	5-Br	4-F	4-OCF ₂ Br
H	H	H	O	5-Br	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-Br	4-F	4-OCF ₃
H	H	H	O	5-Br	4-F	4-SCF ₃
H	H	H	O	5-Br	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-Br	4-F	3,4-Cl ₂
H	H	H	O	5-OCHF ₂	4-F	4-Cl
H	H	H	O	5-OCHF ₂	4-F	4-Br
H	H	H	O	5-OCHF ₂	4-F	4-CF ₃
H	H	H	O	5-OCHF ₂	4-F	4-OCHF ₂
H	H	H	O	5-OCHF ₂	4-F	4-OCF ₂ Br
H	H	H	O	5-OCHF ₂	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-OCHF ₂	4-F	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-F	4-SCF ₃
H	H	H	O	5-OCHF ₂	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-OCHF ₂	4-F	3,4-Cl ₂
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-Cl
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-Br
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-CF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-OCHF ₂
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-OCF ₂ Br
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-OCF ₂ CHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-SCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-F	3,4-Cl ₂
H	H	H	O	5-OCF ₃	4-F	4-Cl
H	H	H	O	5-OCF ₃	4-F	4-Br
H	H	H	O	5-OCF ₃	4-F	4-CF ₃
H	H	H	O	5-OCF ₃	4-F	4-OCHF ₂
H	H	H	O	5-OCF ₃	4-F	4-OCF ₂ Br
H	H	H	O	5-OCF ₃	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-OCF ₃	4-F	4-OCF ₃
H	H	H	O	5-OCF ₃	4-F	4-SCF ₃
H	H	H	O	5-OCF ₃	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-OCF ₃	4-F	3,4-Cl ₂
H	H	H	O	5-Cl	4-CN	4-Cl
H	H	H	O	5-Cl	4-CN	4-Br
H	H	H	O	5-Cl	4-CN	4-CF ₃
H	H	H	O	5-Cl	4-CN	4-OCHF ₂
H	H	H	O	5-Cl	4-CN	4-OCF ₂ Br
H	H	H	O	5-Cl	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	5-Cl	4-CN	4-OCF ₃
H	H	H	O	5-Cl	4-CN	4-SCF ₃
H	H	H	O	5-Cl	4-CN	4-OSO ₂ CF ₃
H	H	H	O	5-Cl	4-CN	3,4-Cl ₂
H	H	H	O	5-CF ₃	4-CN	4-Cl
H	H	H	O	5-CF ₃	4-CN	4-Br
H	H	H	O	5-CF ₃	4-CN	4-CF ₃
H	H	H	O	5-CF ₃	4-CN	4-OCHF ₂
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ Br
H	H	H	O	5-CF ₃	4-CN	4-OCF ₂ CHF ₂
H	H	H	O	5-CF ₃	4-CN	4-OCF ₃
H	H	H	O	5-CF ₃	4-CN	4-SCF ₃
H	H	H	O	5-CF ₃	4-CN	4-OSO ₂ CF ₃
H	H	H	O	5-CF ₃	4-CN	3,4-Cl ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-Cl
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-Br
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-CF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCHF ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₂ Br
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-SCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	3,4-Cl ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-Cl
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-Br
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-CF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCHF ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₂ Br
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-SCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-OCF ₂ CHF ₂	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-F	3,4-Cl ₂
H	H	H	O	4-F	4-F	4-Cl
H	H	H	O	4-F	4-F	4-Br
H	H	H	O	4-F	4-F	4-CF ₃
H	H	H	O	4-F	4-F	4-OCHF ₂
H	H	H	O	4-F	4-F	4-OCF ₂ Br
H	H	H	O	4-F	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4-F	4-F	4-OCF ₃
H	H	H	O	4-F	4-F	4-SCF ₃
H	H	H	O	4-F	4-F	4-OSO ₂ CF ₃
H	H	H	O	4-F	4-F	3,4-Cl ₂
H	H	H	O	5-CN	4-F	4-Cl
H	H	H	O	5-CN	4-F	4-Br
H	H	H	O	5-CN	4-F	4-CF ₃
H	H	H	O	5-CN	4-F	4-OCHF ₂
H	H	H	O	5-CN	4-F	4-OCF ₂ Br
H	H	H	O	5-CN	4-F	4-OCF ₂ CHF ₂
H	H	H	O	5-CN	4-F	4-OCF ₃
H	H	H	O	5-CN	4-F	4-SCF ₃
H	H	H	O	5-CN	4-F	4-OSO ₂ CF ₃
H	H	H	O	5-CN	4-F	3,4-Cl ₂
H	H	H	O	4-OCHF ₂	4-F	4-Cl
H	H	H	O	4-OCHF ₂	4-F	4-Br
H	H	H	O	4-OCHF ₂	4-F	4-CF ₃
H	H	H	O	4-OCHF ₂	4-F	4-OCHF ₂
H	H	H	O	4-OCHF ₂	4-F	4-OCF ₂ Br
H	H	H	O	4-OCHF ₂	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4-OCHF ₂	4-F	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-F	4-SCF ₃
H	H	H	O	4-OCHF ₂	4-F	4-OSO ₂ CF ₃
H	H	H	O	4-OCHF ₂	4-F	3,4-Cl ₂
H	H	H	O	5-F	2,4-F ₂	4-Cl
H	H	H	O	5-F	2,4-F ₂	4-Br
H	H	H	O	5-F	2,4-F ₂	4-CF ₃
H	H	H	O	5-F	2,4-F ₂	4-OCHF ₂
H	H	H	O	5-F	2,4-F ₂	4-OCF ₂ Br
H	H	H	O	5-F	2,4-F ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-F	2,4-F ₂	4-OCF ₃
H	H	H	O	5-F	2,4-F ₂	4-SCF ₃
H	H	H	O	5-F	2,4-F ₂	4-OSO ₂ CF ₃
H	H	H	O	5-F	2,4-F ₂	3,4-Cl ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-F	3,4-F ₂	4-Cl
H	H	H	O	5-F	3,4-F ₂	4-Br
H	H	H	O	5-F	3,4-F ₂	4-CF ₃
H	H	H	O	5-F	3,4-F ₂	4-OCHF ₂
H	H	H	O	5-F	3,4-F ₂	4-OCF ₂ Br
H	H	H	O	5-F	3,4-F ₂	4-OCF ₂ CHF ₂
H	H	H	O	5-F	3,4-F ₂	4-OCF ₃
H	H	H	O	5-F	3,4-F ₂	4-SCF ₃
H	H	H	O	5-F	3,4-F ₂	4-OSO ₂ CF ₃
H	H	H	O	5-F	3,4-F ₂	3,4-Cl ₂
H	H	H	O	4,5-F ₂	4-F	4-Cl
H	H	H	O	4,5-F ₂	4-F	4-Br
H	H	H	O	4,5-F ₂	4-F	4-CF ₃
H	H	H	O	4,5-F ₂	4-F	4-OCHF ₂
H	H	H	O	4,5-F ₂	4-F	4-OCF ₂ Br
H	H	H	O	4,5-F ₂	4-F	4-OCF ₂ CHF ₂
H	H	H	O	4,5-F ₂	4-F	4-OCF ₃
H	H	H	O	4,5-F ₂	4-F	4-SCF ₃
H	H	H	O	4,5-F ₂	4-F	4-OSO ₂ CF ₃
H	H	H	O	4,5-F ₂	4-F	3,4-Cl ₂
H	H	H	O	5-CF ₃	H	4-Cl
H	H	H	O	5-CF ₃	2-F	4-CF ₃
H	H	H	O	5-CF ₃	3-F	4-OCF ₃
H	H	H	O	5-CF ₃	2-Cl	4-Cl
H	H	H	O	5-CF ₃	3-Cl	4-CF ₃
H	H	H	O	5-CF ₃	4-Cl	4-OCF ₃
H	H	H	O	5-CF ₃	3-Br	4-Cl
H	H	H	O	5-CF ₃	4-Br	4-CF ₃
H	H	H	O	5-CF ₃	3-I	4-OCF ₃
H	H	H	O	5-CF ₃	4-I	4-Cl
H	H	H	O	5-CF ₃	4-CH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-CH ₂ CH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH(CH ₃) ₂	4-Cl
H	H	H	O	5-CF ₃	4-CH ₂ CH ₂ CH ₂ CH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-C(CH ₃) ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH ₂ CH=CH ₂	4-Cl
H	H	H	O	5-CF ₃	4-A1	4-CF ₃
H	H	H	O	5-CF ₃	4-A2	4-OCF ₃
H	H	H	O	5-CF ₃	4-A3	4-Cl
H	H	H	O	5-CF ₃	4-A4	4-CF ₃
H	H	H	O	5-CF ₃	4-CHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH ₂ Br	4-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-CH ₂ Cl	4-CF ₃
H	H	H	O	5-CF ₃	2-CF ₃	4-Cl
H	H	H	O	5-CF ₃	3-CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-CF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH=C(Cl)CF ₃	4-Cl
H	H	H	O	5-CF ₃	4-(A4-1-Cl)	4-CF ₃
H	H	H	O	5-CF ₃	4-CH ₂ CN	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH ₂ OH	4-Cl
H	H	H	O	5-CF ₃	4-CH ₂ CO ₂ H	4-CF ₃
H	H	H	O	5-CF ₃	4-OCH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-OCH ₂ CH ₃	4-Cl
H	H	H	O	5-CF ₃	4-OCH(CH ₃) ₂	4-CF ₃
H	H	H	O	5-CF ₃	4-OCH ₂ CH ₂ CH ₂ CH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-OC(CH ₃) ₃	4-Cl
H	H	H	O	5-CF ₃	4-O(A4)	4-CF ₃
H	H	H	O	5-CF ₃	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-OCF ₂ Br	4-Cl
H	H	H	O	5-CF ₃	2-OCF ₃	4-CF ₃
H	H	H	O	5-CF ₃	3-OCF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-OCF ₃	4-Cl
H	H	H	O	5-CF ₃	4-OCH ₂ CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-OCF ₂ CF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-CF ₃	4-OCF ₂ CHFC1	4-CF ₃
H	H	H	O	5-CF ₃	4-OCF ₂ CHFBr	4-Cl
H	H	H	O	5-CF ₃	4-OCF ₂ CF ₂ CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-OCH ₂ CH=CHCl	4-OCF ₃
H	H	H	O	5-CF ₃	4-O(A4-2,2-Cl ₂)	4-Cl
H	H	H	O	5-CF ₃	4-SCH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-SCHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-SCF ₂ Br	4-Cl
H	H	H	O	5-CF ₃	4-SCF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-SCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-SOCH ₃	4-Cl
H	H	H	O	5-CF ₃	4-SOCF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-SOCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-SO ₂ CH ₃	4-Cl
H	H	H	O	5-CF ₃	4-SO ₂ CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-SO ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-SO ₂ CF ₂ Br	4-Cl
H	H	H	O	5-CF ₃	4-CH ₂ OCH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-OCF ₂ CHFOCF ₃	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	4-CH ₂ SCH ₃	4-Cl
H	H	H	O	5-CF ₃	4-CH ₂ COCH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-CH ₂ CO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-OCO ₂ CH ₃	4-Cl
H	H	H	O	5-CF ₃	4-OCOCH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-COCH ₃	4-Cl
H	H	H	O	5-CF ₃	4-COCF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-CO ₂ CH ₂ CH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-CO ₂ C(CH ₃) ₃	4-Cl
H	H	H	O	5-CF ₃	4-CO ₂ CH ₂ CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-OCH ₂ CO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-NO ₂	4-Cl
H	H	H	O	5-CF ₃	4-OH	4-CF ₃
H	H	H	O	5-CF ₃	4-CO ₂ H	4-OCF ₃
H	H	H	O	5-CF ₃	4-SCN	4-Cl
H	H	H	O	5-CF ₃	4-OSO ₂ CH ₃	4-CF ₃
H	H	H	O	5-CF ₃	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-CSCH ₃	4-Cl
H	H	H	O	5-CF ₃	4-NH ₂	4-CF ₃
H	H	H	O	5-CF ₃	4-N(CH ₃) ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-N(CH ₃)CH ₂ CH=CH ₂	4-Cl
H	H	H	O	5-CF ₃	4-CON(CH ₃) ₂	4-CF ₃
H	H	H	O	5-CF ₃	4-OCN(CH ₃) ₂	4-OCF ₃
H	H	H	O	5-CF ₃	4-NHCOCH ₃	4-Cl
H	H	H	O	5-CF ₃	4-SO ₂ N(CH ₃) ₂	4-CF ₃
H	H	H	O	5-CF ₃	4-Si(CH ₃) ₃	4-OCF ₃
H	H	H	O	5-CF ₃	4-C ₆ H ₅	4-Cl
H	H	H	O	5-CF ₃	4-(C ₆ H ₄ -4-Cl)	4-CF ₃
H	H	H	O	5-CF ₃	4-OC ₆ H ₅	4-Cl
H	H	H	O	5-CF ₃	4-O(C ₆ H ₄ -4-CF ₃)	4-CF ₃
H	H	H	O	5-CF ₃	3-O(C ₆ H ₄ -4-CF ₃)	4-OCF ₃
H	H	H	O	5-CF ₃	4-S(C ₆ H ₄ -4-CF ₃)	4-Cl
H	H	H	O	5-CF ₃	4-SO ₂ C ₆ H ₅	4-CF ₃
H	H	H	O	5-CF ₃	4-NH(C ₆ H ₄ -4-Cl)	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH ₂ C ₆ H ₅	4-Cl
H	H	H	O	5-CF ₃	4-COC ₆ H ₅	4-CF ₃
H	H	H	O	5-CF ₃	4-OCH ₂ (C ₆ H ₄ -4-CF ₃)	4-OCF ₃
H	H	H	O	5-CF ₃	4-CH ₂ OC ₆ H ₅	4-Cl
H	H	H	O	5-CF ₃	4-NHCH ₂ C ₆ H ₅	4-CF ₃
H	H	H	O	5-CF ₃	4-CH ₂ CH ₂ C ₆ H ₅	4-OCF ₃
H	H	H	O	5-CF ₃	4-N=NC ₆ H ₅	4-Cl
H	H	H	O	5-CF ₃	4-CH=CHC ₆ H ₅	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	2-CH=CH-CH=CH-3	4-OCF ₃
H	H	H	O	5-CF ₃	3-CH=CH-CH=CH-4	4-Cl
H	H	H	O	5-CF ₃	3-OCH ₂ O-4	4-CF ₃
H	H	H	O	5-CF ₃	3-OCF ₂ O-4	4-OCF ₃
H	H	H	O	5-CF ₃	3-OCH ₂ CH ₂ O-4	4-Cl
H	H	H	O	5-CF ₃	3-OCF ₂ CF ₂ O-4	4-CF ₃
H	H	H	O	5-CF ₃	3-OCF ₂ CF ₂ -4	4-OCF ₃
H	H	H	O	5-CF ₃	3-CF ₂ CF ₂ O-4	4-Cl
H	H	H	O	5-CF ₃	4-NHSO ₂ CH ₃	4-CF ₃
H	H	H	O	5-CF ₃	2,3-F ₂	4-Cl
H	H	H	O	5-CF ₃	2,4-F ₂	4-CF ₃
H	H	H	O	5-CF ₃	2,5-F ₂	4-OCF ₃
H	H	H	O	5-CF ₃	2,6-F ₂	4-Cl
H	H	H	O	5-CF ₃	3,4-F ₂	4-CF ₃
H	H	H	O	5-CF ₃	3,5-F ₂	4-OCF ₃
H	H	H	O	5-CF ₃	2,4-Cl ₂	4-Cl
H	H	H	O	5-CF ₃	3,4-Cl ₂	4-CF ₃
H	H	H	O	5-CF ₃	3,4-Br ₂	4-OCF ₃
H	H	H	O	5-CF ₃	2,4-I ₂	4-Cl
H	H	H	O	5-CF ₃	2,4-(CH ₃) ₂	4-CF ₃
H	H	H	O	5-CF ₃	3,4-(OCH ₃) ₂	4-OCF ₃
H	H	H	O	5-CF ₃	2-F-4-Cl	4-Cl
H	H	H	O	5-CF ₃	2-F-4-Br	4-CF ₃
H	H	H	O	5-CF ₃	2-F-4-CF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	2-F-4-OCHF ₂	4-Cl
H	H	H	O	5-CF ₃	2-F-4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	2-F-4-O(C ₆ H ₄ -4-Cl)	4-OCF ₃
H	H	H	O	5-CF ₃	2-F-4-O(A5-5-CF ₃)	4-Cl
H	H	H	O	5-CF ₃	3-Cl-4-CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	3-F-4-OCF ₃	4-OCF ₃
H	H	H	O	5-CF ₃	3,4-(CF ₃) ₂	4-Cl
H	H	H	O	5-CF ₃	3,4-(OCF ₃) ₂	4-CF ₃
H	H	H	O	5-CF ₃	3-CN	4-Cl
H	H	H	O	5-CF ₃	2-Cl-4-CN	4-CF ₃
H	H	H	O	5-CF ₃	3-Cl-4-CN	4-OCF ₃
H	H	H	O	5-CF ₃	2-CH ₃ -4-CN	4-Cl
H	H	H	O	5-CF ₃	3-CH ₃ -4-CN	4-CF ₃
H	H	H	O	5-CF ₃	3,4-(CN) ₂	4-OCF ₃
H	H	H	O	5-CF ₃	2,5-F ₂ -4-Cl	4-Cl
H	H	H	O	5-CF ₃	3,5-F ₂ -4-CF ₃	4-CF ₃
H	H	H	O	5-CF ₃	2,3,4-F ₃	4-OCF ₃
H	H	H	O	5-CF ₃	2,4,5-F ₃	4-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-CF ₃	3,4,5-F ₃	4-CF ₃
H	H	H	O	5-CF ₃	2,3,4-Cl ₃	4-OCF ₃
H	H	H	O	5-CF ₃	2,4,5-Cl ₃	4-Cl
H	H	H	O	5-CF ₃	2,4,6-Cl ₃	4-CF ₃
H	H	H	O	5-CF ₃	2-F-4,5-Cl ₂	4-OCF ₃
H	H	H	O	5-CF ₃	3-Cl-4-F	4-Cl
H	H	H	O	5-CF ₃	2-F-4-OCHF ₂ -5-Cl	4-CF ₃
H	H	H	O	5-CF ₃	2,3,4,5-F ₄	4-OCF ₃
H	H	H	O	5-CF ₃	2,3,5,6-F ₄	4-Cl
H	H	H	O	5-CF ₃	2,4-F ₂ -3,5-Cl ₂	4-CF ₃
H	H	H	O	5-CF ₃	2,3,4,5,6-F ₅	4-OCF ₃
H	H	H	O	5-CF ₃	2,3,5,6-F ₄ -4-CN	4-Cl
H	H	H	O	5-CF ₃	4-NHCONHCH ₃	4-CF ₃
H	H	H	O	5-F	3-F	4-Cl
H	H	H	O	5-F	3-Cl	4-CF ₃
H	H	H	O	5-F	3-Br	4-OCF ₃
H	H	H	O	5-F	4-CN	4-Cl
H	H	H	O	5-F	4-NO ₂	4-CF ₃
H	H	H	O	5-F	4-CH ₃	4-OCF ₃
H	H	H	O	5-F	4-CF ₃	4-Cl
H	H	H	O	5-F	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	5-F	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-F	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	5-F	4-OCF ₂ Br	4-CF ₃
H	H	H	O	5-F	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-F	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-F	4-SCHF ₂	4-CF ₃
H	H	H	O	5-F	4-SCF ₃	4-OCF ₃
H	H	H	O	5-F	4-SCH ₃	4-Cl
H	H	H	O	5-F	4-SOCH ₃	4-CF ₃
H	H	H	O	5-F	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-F	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	5-F	4-NHCOCH ₃	4-CF ₃
H	H	H	O	5-F	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-F	2,4-Cl ₂	4-Cl
H	H	H	O	5-F	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	5-OCHF ₂	3-F	4-Cl
H	H	H	O	5-OCHF ₂	4-Cl	4-CF ₃
H	H	H	O	5-OCHF ₂	4-Br	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-CN	4-Cl
H	H	H	O	5-OCHF ₂	4-NO ₂	4-CF ₃
H	H	H	O	5-OCHF ₂	4-CH ₃	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-OCHF ₂	4-CF ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	5-OCHF ₂	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-OCF ₂ Br	4-CF ₃
H	H	H	O	5-OCHF ₂	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-SCHF ₂	4-CF ₃
H	H	H	O	5-OCHF ₂	4-SCF ₃	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-SCH ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-SOCH ₃	4-CF ₃
H	H	H	O	5-OCHF ₂	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-OCHF ₂	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-NHCOCH ₃	4-CF ₃
H	H	H	O	5-OCHF ₂	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-OCHF ₂	2,4-Cl ₂	4-Cl
H	H	H	O	5-OCHF ₂	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	4-OCHF ₂	3-F	4-Cl
H	H	H	O	4-OCHF ₂	4-Cl	4-CF ₃
H	H	H	O	4-OCHF ₂	4-Br	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-CN	4-Cl
H	H	H	O	4-OCHF ₂	4-NO ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	4-CH ₃	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-CF ₃	4-Cl
H	H	H	O	4-OCHF ₂	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	4-OCHF ₂	4-OCHF ₂	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	4-OCHF ₂	4-OCF ₂ Br	4-CF ₃
H	H	H	O	4-OCHF ₂	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	4-OCHF ₂	4-SCHF ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	4-SCF ₃	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-SCH ₃	4-Cl
H	H	H	O	4-OCHF ₂	4-SOCH ₃	4-CF ₃
H	H	H	O	4-OCHF ₂	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	4-OCHF ₂	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	4-OCHF ₂	4-NHCOCH ₃	4-CF ₃
H	H	H	O	4-OCHF ₂	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	4-OCHF ₂	2,4-Cl ₂	4-Cl
H	H	H	O	4-OCHF ₂	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	5-Cl	H	4-Cl
H	H	H	O	5-Cl	4-Cl	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-Cl	4-Br	4-OCF ₃
H	H	H	O	5-Cl	4-CN	4-Cl
H	H	H	O	5-Cl	4-NO ₂	4-CF ₃
H	H	H	O	5-Cl	4-CH ₃	4-OCF ₃
H	H	H	O	5-Cl	4-CF ₃	4-Cl
H	H	H	O	5-Cl	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	5-Cl	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-Cl	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	5-Cl	4-OCF ₂ Br	4-CF ₃
H	H	H	O	5-Cl	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-Cl	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-Cl	4-SCHF ₂	4-CF ₃
H	H	H	O	5-Cl	4-SCF ₃	4-OCF ₃
H	H	H	O	5-Cl	4-SCH ₃	4-Cl
H	H	H	O	5-Cl	4-SOCH ₃	4-CF ₃
H	H	H	O	5-Cl	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-Cl	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	5-Cl	4-NHCOCH ₃	4-CF ₃
H	H	H	O	5-Cl	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-Cl	2,4-Cl ₂	4-Cl
H	H	H	O	5-Cl	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	5-Br	H	4-Cl
H	H	H	O	5-Br	4-Cl	4-CF ₃
H	H	H	O	5-Br	4-Br	4-OCF ₃
H	H	H	O	5-Br	4-CN	4-Cl
H	H	H	O	5-Br	4-NO ₂	4-CF ₃
H	H	H	O	5-Br	4-CH ₃	4-OCF ₃
H	H	H	O	5-Br	4-CF ₃	4-Cl
H	H	H	O	5-Br	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	5-Br	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-Br	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	5-Br	4-OCF ₂ Br	4-CF ₃
H	H	H	O	5-Br	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-Br	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-Br	4-SCHF ₂	4-CF ₃
H	H	H	O	5-Br	4-SCF ₃	4-OCF ₃
H	H	H	O	5-Br	4-SCH ₃	4-Cl
H	H	H	O	5-Br	4-SOCH ₃	4-CF ₃
H	H	H	O	5-Br	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	5-Br	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	5-Br	4-NHCOCH ₃	4-CF ₃
H	H	H	O	5-Br	4-NHSO ₂ CH ₃	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-Br	2,4-Cl ₂	4-Cl
H	H	H	O	5-Br	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	4,5-F ₂	H	4-Cl
H	H	H	O	4,5-F ₂	4-Cl	4-CF ₃
H	H	H	O	4,5-F ₂	4-Br	4-OCF ₃
H	H	H	O	4,5-F ₂	4-CN	4-Cl
H	H	H	O	4,5-F ₂	4-NO ₂	4-CF ₃
H	H	H	O	4,5-F ₂	4-CH ₃	4-OCF ₃
H	H	H	O	4,5-F ₂	4-CF ₃	4-Cl
H	H	H	O	4,5-F ₂	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	4,5-F ₂	4-OCHF ₂	4-OCF ₃
H	H	H	O	4,5-F ₂	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	4,5-F ₂	4-OCF ₂ Br	4-CF ₃
H	H	H	O	4,5-F ₂	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	4,5-F ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	4,5-F ₂	4-SCHF ₂	4-CF ₃
H	H	H	O	4,5-F ₂	4-SCF ₃	4-OCF ₃
H	H	H	O	4,5-F ₂	4-SCH ₃	4-Cl
H	H	H	O	4,5-F ₂	4-SOCH ₃	4-CF ₃
H	H	H	O	4,5-F ₂	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	4,5-F ₂	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	4,5-F ₂	4-NHCOCH ₃	4-CF ₃
H	H	H	O	4,5-F ₂	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	4,5-F ₂	2,4-Cl ₂	4-Cl
H	H	H	O	4,5-F ₂	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	4-Cl	4-F	4-Cl
H	H	H	O	4-Cl	4-Cl	4-CF ₃
H	H	H	O	4-Cl	4-Br	4-OCF ₃
H	H	H	O	4-Cl	4-CN	4-Cl
H	H	H	O	4-Cl	4-NO ₂	4-CF ₃
H	H	H	O	4-Cl	4-CH ₃	4-OCF ₃
H	H	H	O	4-Cl	4-CF ₃	4-Cl
H	H	H	O	4-Cl	4-OCH ₂ CH ₃	4-CF ₃
H	H	H	O	4-Cl	4-OCHF ₂	4-OCF ₃
H	H	H	O	4-Cl	4-OCH ₂ CF ₃	4-Cl
H	H	H	O	4-Cl	4-OCF ₂ Br	4-CF ₃
H	H	H	O	4-Cl	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	4-Cl	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	4-Cl	4-SCHF ₂	4-CF ₃
H	H	H	O	4-Cl	4-SCF ₃	4-OCF ₃
H	H	H	O	4-Cl	4-SCH ₃	4-Cl
H	H	H	O	4-Cl	4-SOCH ₃	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4-Cl	4-SO ₂ CH ₃	4-OCF ₃
H	H	H	O	4-Cl	4-OSO ₂ CH ₃	4-Cl
H	H	H	O	4-Cl	4-NHCOCH ₃	4-CF ₃
H	H	H	O	4-Cl	4-NHSO ₂ CH ₃	4-OCF ₃
H	H	H	O	4-Cl	2,4-Cl ₂	4-Cl
H	H	H	O	4-Cl	3-OCF ₂ O-4	4-CF ₃
H	H	H	O	3-F	4-F	4-Cl
H	H	H	O	3-Cl	4-F	4-CF ₃
H	H	H	O	4-Cl	4-F	4-OCF ₃
H	H	H	O	4-Br	4-F	4-Cl
H	H	H	O	5-I	4-F	4-CF ₃
H	H	H	O	4-I	4-F	4-OCF ₃
H	H	H	O	5-CH ₃	4-F	4-Cl
H	H	H	O	4-CH ₃	4-F	4-CF ₃
H	H	H	O	4-CH ₂ CH ₃	4-F	4-OCF ₃
H	H	H	O	5-CH(CH ₃) ₂	4-F	4-Cl
H	H	H	O	4-CH ₂ CH ₂ CH ₂ CH ₃	4-F	4-CF ₃
H	H	H	O	4-C(CH ₃) ₃	4-F	4-OCF ₃
H	H	H	O	5-CH ₂ CH=CH ₂	4-F	4-Cl
H	H	H	O	4-A1	4-F	4-CF ₃
H	H	H	O	4-A2	4-F	4-OCF ₃
H	H	H	O	4-A3	4-F	4-Cl
H	H	H	O	4-A4	4-F	4-CF ₃
H	H	H	O	5-CHF ₂	4-F	4-OCF ₃
H	H	H	O	4-CHF ₂	4-F	4-Cl
H	H	H	O	5-CH ₂ Br	4-F	4-CF ₃
H	H	H	O	5-CH ₂ Cl	4-F	4-OCF ₃
H	H	H	O	3-CF ₃	4-F	4-Cl
H	H	H	O	4-CF ₃	4-F	4-CF ₃
H	H	H	O	4-CH ₂ CN	4-F	4-Cl
H	H	H	O	4-CH ₂ OH	4-F	4-CF ₃
H	H	H	O	4-CH ₂ CO ₂ H	4-F	4-OCF ₃
H	H	H	O	5-OCH ₃	4-F	4-Cl
H	H	H	O	4-OCH ₃	4-F	4-CF ₃
H	H	H	O	5-OCH ₂ CH ₃	4-F	4-OCF ₃
H	H	H	O	4-OCH(CH ₃) ₂	4-F	4-Cl
H	H	H	O	4-OC(CH ₃) ₃	4-F	4-CF ₃
H	H	H	O	3-OCHF ₂	4-F	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-F	4-Cl
H	H	H	O	4-OCF ₂ Br	4-F	4-CF ₃
H	H	H	O	4-OCF ₃	4-F	4-OCF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-F	4-Cl

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R ¹	R ²	R ³	W	X _x	Y _m	Z _n
H	H	H	O	4-OCH ₂ CF ₃	4-F	4-CF ₃
H	H	H	O	5-OCF ₂ CF ₃	4-F	4-OCF ₃
H	H	H	O	4-OCF ₂ CF ₃	4-F	4-Cl
H	H	H	O	3-OCF ₂ CHF ₂	4-F	4-CF ₃
H	H	H	O	4-OCF ₂ CHF ₂	4-F	4-OCF ₃
H	H	H	O	5-OCF ₂ CHFC1	4-F	4-Cl
H	H	H	O	4-OCF ₂ CHFBr	4-F	4-CF ₃
H	H	H	O	5-OCF ₂ CF ₂ CF ₃	4-F	4-OCF ₃
H	H	H	O	5-OCH ₂ CH=CHCl	4-F	4-Cl
H	H	H	O	5-O(A1-2,2-Cl ₂)	4-F	4-CF ₃
H	H	H	O	5-SCH ₃	4-F	4-Cl
H	H	H	O	4-SCH ₃	4-F	4-CF ₃
H	H	H	O	5-SCHF ₂	4-F	4-OCF ₃
H	H	H	O	4-SCHF ₂	4-F	4-Cl
H	H	H	O	5-SCF ₃	4-F	4-CF ₃
H	H	H	O	4-SCF ₃	4-F	4-OCF ₃
H	H	H	O	5-SOCH ₃	4-F	4-Cl
H	H	H	O	4-SOCH ₃	4-F	4-CF ₃
H	H	H	O	5-SO ₂ CH ₃	4-F	4-OCF ₃
H	H	H	O	4-SO ₂ CH ₃	4-F	4-Cl
H	H	H	O	5-SO ₂ CHF ₂	4-F	4-CF ₃
H	H	H	O	4-CH ₂ OCH ₃	4-F	4-OCF ₃
H	H	H	O	5-OCF ₂ CHFOCF ₃	4-F	4-Cl
H	H	H	O	4-OCF ₂ CHFOCF ₃	4-F	4-CF ₃
H	H	H	O	4-CH ₂ COCH ₃	4-F	4-OCF ₃
H	H	H	O	4-CH ₂ CO ₂ CH ₃	4-F	4-Cl
H	H	H	O	4-OCO ₂ CH ₃	4-F	4-CF ₃
H	H	H	O	5-OCOCH ₃	4-F	4-OCF ₃
H	H	H	O	4-COCH ₃	4-F	4-Cl
H	H	H	O	4-COCF ₃	4-F	4-CF ₃
H	H	H	O	4-CO ₂ CH ₂ CH ₃	4-F	4-OCF ₃
H	H	H	O	4-CO ₂ C(CH ₃) ₃	4-F	4-Cl
H	H	H	O	5-CO ₂ CH ₂ CF ₃	4-F	4-CF ₃
H	H	H	O	5-NO ₂	4-F	4-Cl
H	H	H	O	4-NO ₂	4-F	4-CF ₃
H	H	H	O	5-CN	4-F	4-OCF ₃
H	H	H	O	4-CN	4-F	4-Cl
H	H	H	O	5-OH	4-F	4-CF ₃
H	H	H	O	4-OH	4-F	4-OCF ₃
H	H	H	O	4-SCN	4-F	4-Cl
H	H	H	O	5-OSO ₂ CH ₃	4-F	4-CF ₃
H	H	H	O	4-OSO ₂ CH ₃	4-F	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-OSO ₂ CF ₃	4-F	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-F	4-CF ₃
H	H	H	O	4-CSCH ₃	4-F	4-OCF ₃
H	H	H	O	4-NH ₂	4-F	4-Cl
H	H	H	O	4-N(CH ₃) ₂	4-F	4-CF ₃
H	H	H	O	4-CON(CH ₃) ₂	4-F	4-OCF ₃
H	H	H	O	5-OCON(CH ₃) ₂	4-F	4-Cl
H	H	H	O	4-NHCOCH ₃	4-F	4-CF ₃
H	H	H	O	4-SO ₂ N(CH ₃) ₂	4-F	4-OCF ₃
H	H	H	O	4-Si(CH ₃) ₃	4-F	4-Cl
H	H	H	O	4-C ₆ H ₅	4-F	4-CF ₃
H	H	H	O	5-OC ₆ H ₅	4-F	4-OCF ₃
H	H	H	O	4-OC ₆ H ₅	4-F	4-Cl
H	H	H	O	5-SC ₆ H ₅	4-F	4-CF ₃
H	H	H	O	5-SO ₂ C ₆ H ₅	4-F	4-Cl
H	H	H	O	5-NHC ₆ H ₅	4-F	4-CF ₃
H	H	H	O	5-CH ₂ C ₆ H ₅	4-F	4-OCF ₃
H	H	H	O	5-COC ₆ H ₅	4-F	4-Cl
H	H	H	O	5-NHSO ₂ CH ₃	4-F	4-CF ₃
H	H	H	O	3-CH=CH-CH=CH-4	4-F	4-OCF ₃
H	H	H	O	4-CH=CH-CH=CH-5	4-F	4-Cl
H	H	H	O	4-OCH ₂ O-5	4-F	4-CF ₃
H	H	H	O	4-OCF ₂ O-5	4-F	4-OCF ₃
H	H	H	O	4-OCH ₂ CH ₂ O-5	4-F	4-Cl
H	H	H	O	4-OCF ₂ CF ₂ O-5	4-F	4-CF ₃
H	H	H	O	3,4-F ₂	4-F	4-OCF ₃
H	H	H	O	3,4-F ₂	4-F	4-Cl
H	H	H	O	3,5-F ₂	4-F	4-CF ₃
H	H	H	O	3,5-F ₂	4-F	4-OCF ₃
H	H	H	O	3,4-Cl ₂	4-F	4-Cl
H	H	H	O	3,5-Cl ₂	4-F	4-CF ₃
H	H	H	O	3,4-Br ₂	4-F	4-OCF ₃
H	H	H	O	3,5-I ₂	4-F	4-Cl
H	H	H	O	3,4-(CH ₃) ₂	4-F	4-CF ₃
H	H	H	O	4,5-(OCH ₃) ₂	4-F	4-OCF ₃
H	H	H	O	4,5-(OCF ₃) ₂	4-F	4-Cl
H	H	H	O	3,5-(OCHF ₂) ₂	4-F	4-CF ₃
H	H	H	O	4,5-(CF ₃) ₂	4-F	4-Cl
H	H	H	O	3,5-(CF ₃) ₂	4-F	4-CF ₃
H	H	H	O	3-F-4-Cl	4-F	4-OCF ₃
H	H	H	O	3-F-5-Cl	4-F	4-Cl
H	H	H	O	3-F-5-CF ₃	4-F	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	3-F-5-OCHF ₂	4-F	4-OCF ₃
H	H	H	O	3-Cl-5-CF ₃	4-F	4-Cl
H	H	H	O	3-Cl-4-OCHF ₂	4-F	4-CF ₃
H	H	H	O	3-Cl-4-CN	4-F	4-OCF ₃
H	H	H	O	3-Cl-4-F	4-F	4-Cl
H	H	H	O	3-Cl-5-OSO ₂ CF ₃	4-F	4-CF ₃
H	H	H	O	3-F-4-OSO ₂ CF ₃	4-F	4-OCF ₃
H	H	H	O	3,4,5-F ₃	4-F	4-Cl
H	H	H	O	3,4,5-F ₃	4-F	4-CF ₃
H	H	H	O	3,4,5-Cl ₃	4-F	4-OCF ₃
H	H	H	O	3,4,5-Cl ₃	4-F	4-Cl
H	H	H	O	3-F-4,5-Cl ₂	4-F	4-CF ₃
H	H	H	O	3,5-Cl ₂ -4-CF ₃	4-F	4-OCF ₃
H	H	H	O	4-F	4-Cl	4-Cl
H	H	H	O	5-Cl	4-Cl	4-CF ₃
H	H	H	O	5-Cl	4-Cl	4-OCF ₃
H	H	H	O	5-Br	4-Cl	4-Cl
H	H	H	O	5-CH ₃	4-Cl	4-CF ₃
H	H	H	O	4-CF ₃	4-Cl	4-OCF ₃
H	H	H	O	5-OCH ₃	4-Cl	4-Cl
H	H	H	O	5-OCHF ₂	4-Cl	4-CF ₃
H	H	H	O	4-OCHF ₂	4-Cl	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-Cl	4-Cl
H	H	H	O	5-OCF ₃	4-Cl	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-Cl	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-Cl	4-Cl
H	H	H	O	5-SCHF ₂	4-Cl	4-CF ₃
H	H	H	O	5-SCF ₃	4-Cl	4-OCF ₃
H	H	H	O	5-NO ₂	4-Cl	4-Cl
H	H	H	O	5-CN	4-Cl	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	4-Cl	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-Cl	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-Cl	4-CF ₃
H	H	H	O	4,5-F ₂	4-Cl	4-OCF ₃
H	H	H	O	3,5-F ₂	4-Cl	4-Cl
H	H	H	O	4-Cl-5-F	4-Cl	4-CF ₃
H	H	H	O	4-F	4-Br	4-Cl
H	H	H	O	3-Cl	4-Br	4-CF ₃
H	H	H	O	4-Cl	4-Br	4-OCF ₃
H	H	H	O	3-Br	4-Br	4-Cl
H	H	H	O	3-CH ₃	4-Br	4-CF ₃
H	H	H	O	4-CF ₃	4-Br	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	3-OCH ₃	4-Br	4-Cl
H	H	H	O	3-OCHF ₂	4-Br	4-CF ₃
H	H	H	O	4-OCHF ₂	4-Br	4-OCF ₃
H	H	H	O	3-OCF ₂ Br	4-Br	4-Cl
H	H	H	O	3-OCF ₃	4-Br	4-CF ₃
H	H	H	O	3-OCH ₂ CF ₃	4-Br	4-OCF ₃
H	H	H	O	3-OCF ₂ CHF ₂	4-Br	4-Cl
H	H	H	O	3-SCHF ₂	4-Br	4-CF ₃
H	H	H	O	3-SCF ₃	4-Br	4-OCF ₃
H	H	H	O	3-NO ₂	4-Br	4-Cl
H	H	H	O	3-CN	4-Br	4-CF ₃
H	H	H	O	3-OSO ₂ CH ₃	4-Br	4-OCF ₃
H	H	H	O	3-OSO ₂ CF ₃	4-Br	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-Br	4-CF ₃
H	H	H	O	3,4-F ₂	4-Br	4-OCF ₃
H	H	H	O	3,5-F ₂	4-Br	4-Cl
H	H	H	O	3-Cl-4-F	4-Br	4-CF ₃
H	H	H	O	4-F	4-CN	4-Cl
H	H	H	O	3-Cl	4-CN	4-CF ₃
H	H	H	O	4-Cl	4-CN	4-OCF ₃
H	H	H	O	5-Br	4-CN	4-Cl
H	H	H	O	5-CH ₃	4-CN	4-CF ₃
H	H	H	O	4-CF ₃	4-CN	4-OCF ₃
H	H	H	O	5-OCH ₃	4-CN	4-Cl
H	H	H	O	5-OCHF ₂	4-CN	4-CF ₃
H	H	H	O	4-OCHF ₂	4-CN	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-CN	4-Cl
H	H	H	O	5-OCF ₃	4-CN	4-CF ₃
H	H	H	O	5-OCF ₃	4-CN	4-OCF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-CN	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-CN	4-Cl
H	H	H	O	5-SCHF ₂	4-CN	4-CF ₃
H	H	H	O	5-SCF ₃	4-CN	4-OCF ₃
H	H	H	O	5-NO ₂	4-CN	4-Cl
H	H	H	O	5-CN	4-CN	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	4-CN	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-CN	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-CN	4-CF ₃
H	H	H	O	4,5-F ₂	4-CN	4-OCF ₃
H	H	H	O	3,5-F ₂	4-CN	4-Cl
H	H	H	O	4-Cl-5-F	4-CN	4-CF ₃
H	H	H	O	4-F	4-OCHF ₂	4-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-Cl	4-OCHF ₂	4-CF ₃
H	H	H	O	4-Cl	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-Br	4-OCHF ₂	4-Cl
H	H	H	O	5-CH ₃	4-OCHF ₂	4-CF ₃
H	H	H	O	4-CF ₃	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-OCH ₃	4-OCHF ₂	4-Cl
H	H	H	O	5-OCHF ₂	4-OCHF ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-OCHF ₂	4-Cl
H	H	H	O	5-OCF ₃	4-OCHF ₂	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-OCHF ₂	4-Cl
H	H	H	O	5-SCHF ₂	4-OCHF ₂	4-CF ₃
H	H	H	O	5-SCF ₃	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-NO ₂	4-OCHF ₂	4-Cl
H	H	H	O	5-CN	4-OCHF ₂	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	4-OCHF ₂	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-OCHF ₂	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-OCHF ₂	4-CF ₃
H	H	H	O	4,5-F ₂	4-OCHF ₂	4-OCF ₃
H	H	H	O	3,5-F ₂	4-OCHF ₂	4-Cl
H	H	H	O	4-Cl-5-F	4-OCHF ₂	4-CF ₃
H	H	H	O	4-F	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-Cl	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	4-Cl	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-Br	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-CH ₃	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	4-CF ₃	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-OCH ₃	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-OCHF ₂	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	4-OCHF ₂	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-OCF ₃	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-SCHF ₂	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	5-SCF ₃	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-NO ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	5-CN	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-OSO ₂ CF ₃	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	4,5-F ₂	4-OSO ₂ CF ₃	4-OCF ₃
H	H	H	O	3,5-F ₂	4-OSO ₂ CF ₃	4-Cl
H	H	H	O	4-Cl-5-F	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	O	4-F	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-Cl	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	4-Cl	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-Br	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-CH ₃	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	4-CF ₃	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-OCH ₃	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-OCHF ₂	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-OCF ₃	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-SCHF ₂	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	5-SCF ₃	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-NO ₂	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	5-CN	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	4,5-F ₂	4-OCF ₂ CHF ₂	4-OCF ₃
H	H	H	O	3,5-F ₂	4-OCF ₂ CHF ₂	4-Cl
H	H	H	O	4-Cl-5-F	4-OCF ₂ CHF ₂	4-CF ₃
H	H	H	O	4-F	2,4-F ₂	4-Cl
H	H	H	O	5-Cl	2,4-F ₂	4-CF ₃
H	H	H	O	4-Cl	2,4-F ₂	4-OCF ₃
H	H	H	O	5-Br	2,4-F ₂	4-Cl
H	H	H	O	5-CH ₃	2,4-F ₂	4-CF ₃
H	H	H	O	4-CF ₃	2,4-F ₂	4-OCF ₃
H	H	H	O	5-OCH ₃	2,4-F ₂	4-Cl
H	H	H	O	5-OCHF ₂	2,4-F ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	2,4-F ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	2,4-F ₂	4-Cl
H	H	H	O	5-OCF ₃	2,4-F ₂	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	2,4-F ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	2,4-F ₂	4-Cl
H	H	H	O	5-SCHF ₂	2,4-F ₂	4-CF ₃
H	H	H	O	5-SCF ₃	2,4-F ₂	4-OCF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	O	5-NO ₂	2,4-F ₂	4-Cl
H	H	H	O	5-CN	2,4-F ₂	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	2,4-F ₂	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	2,4-F ₂	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	2,4-F ₂	4-CF ₃
H	H	H	O	4,5-F ₂	2,4-F ₂	4-OCF ₃
H	H	H	O	3,5-F ₂	2,4-F ₂	4-Cl
H	H	H	O	4-Cl-5-F	2,4-F ₂	4-CF ₃
H	H	H	O	4-F	3,4-F ₂	4-Cl
H	H	H	O	5-Cl	3,4-F ₂	4-CF ₃
H	H	H	O	4-Cl	3,4-F ₂	4-OCF ₃
H	H	H	O	5-Br	3,4-F ₂	4-Cl
H	H	H	O	5-CH ₃	3,4-F ₂	4-CF ₃
H	H	H	O	4-CF ₃	3,4-F ₂	4-OCF ₃
H	H	H	O	5-OCH ₃	3,4-F ₂	4-Cl
H	H	H	O	5-OCHF ₂	3,4-F ₂	4-CF ₃
H	H	H	O	4-OCHF ₂	3,4-F ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ Br	3,4-F ₂	4-Cl
H	H	H	O	5-OCF ₃	3,4-F ₂	4-CF ₃
H	H	H	O	5-OCH ₂ CF ₃	3,4-F ₂	4-OCF ₃
H	H	H	O	5-OCF ₂ CHF ₂	3,4-F ₂	4-Cl
H	H	H	O	5-SCHF ₂	3,4-F ₂	4-CF ₃
H	H	H	O	5-SCF ₃	3,4-F ₂	4-OCF ₃
H	H	H	O	5-NO ₂	3,4-F ₂	4-Cl
H	H	H	O	5-CN	3,4-F ₂	4-CF ₃
H	H	H	O	5-OSO ₂ CH ₃	3,4-F ₂	4-OCF ₃
H	H	H	O	5-OSO ₂ CF ₃	3,4-F ₂	4-Cl
H	H	H	O	4-OSO ₂ CF ₃	3,4-F ₂	4-CF ₃
H	H	H	O	4,5-F ₂	3,4-F ₂	4-OCF ₃
H	H	H	O	3,5-F ₂	3,4-F ₂	4-Cl
H	H	H	O	5-Cl-4-F	3,4-F ₂	4-CF ₃
H	H	H	S	5-F	4-F	4-Cl
H	H	H	S	5-F	4-F	4-Br
H	H	H	S	5-F	4-F	4-CF ₃
H	H	H	S	5-F	4-F	4-OCF ₃
H	H	H	S	5-F	4-F	4-OCHF ₂
H	H	H	S	5-F	4-F	4-OCF ₂ Br
H	H	H	S	5-F	4-F	4-OCF ₂ CHF ₂
H	H	H	S	5-F	4-F	4-OSO ₂ CF ₃
H	H	H	S	H	4-F	4-OCF ₃
H	H	H	S	4-F	4-F	4-Cl

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	H	S	5-Cl	4-F	4-CF ₃
H	H	H	S	5-Br	4-F	4-OCF ₃
H	H	H	S	5-CF ₃	4-F	4-Cl
H	H	H	S	5-OCF ₃	4-F	4-CF ₃
H	H	H	S	5-OCHF ₂	4-F	4-OCF ₃
H	H	H	S	4-OCHF ₂	4-F	4-Cl
H	H	H	S	5-F	4-Cl	4-CF ₃
H	H	H	S	5-F	4-Br	4-OCF ₃
H	H	H	S	5-F	4-CF ₃	4-Cl
H	H	H	S	5-F	4-OSO ₂ CF ₃	4-CF ₃
H	H	H	S	5-F	4-CN	4-OCF ₃
H	H	H	S	5-F	3,4-F ₂	4-Cl
H	H	H	S	5-CF ₃	4-CN	4-CF ₃
H	H	CH ₃	O	5-F	4-F	4-Cl
H	H	CH ₃	O	5-F	4-F	4-Br
H	H	CH ₃	O	5-F	4-F	4-CF ₃
H	H	CH ₃	O	5-F	4-F	4-OCF ₃
H	H	CH ₃	O	5-F	4-F	4-OCHF ₂
H	H	CH ₃	O	5-F	4-F	4-OCF ₂ Br
H	H	CH ₃	O	5-F	4-F	4-OCF ₂ CHF ₂
H	H	CH ₃	O	5-F	4-F	4-OSO ₂ CF ₃
H	H	CH ₃	O	H	4-F	4-OCF ₃
H	H	CH ₃	S	4-F	4-F	4-Cl
H	H	CH ₃	O	5-Cl	4-F	4-CF ₃
H	H	CH ₃	O	5-Br	4-F	4-OCF ₃
H	H	CH ₃	O	5-CF ₃	4-F	4-Cl
H	H	CH ₃	O	5-OCF ₃	4-F	4-CF ₃
H	H	CH ₃	O	5-OCHF ₂	4-F	4-OCF ₃
H	H	CH ₃	O	4-OCHF ₂	4-F	4-Cl
H	H	CH ₃	S	5-F	4-Cl	4-CF ₃
H	H	CH ₃	O	5-F	4-Br	4-OCF ₃
H	H	CH ₃	O	5-F	4-CF ₃	4-Cl
H	H	CH ₃	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
H	H	CH ₃	O	5-F	4-CN	4-OCF ₃
H	H	CH ₃	O	3-F	3,4-F ₂	4-Cl
H	H	CH ₃	O	5-CF ₃	4-CN	4-CF ₃
H	CH ₃	H	O	5-F	4-F	4-Cl
H	CH ₃	H	O	5-F	4-F	4-Br
H	CH ₃	H	O	5-F	4-F	4-CF ₃
H	CH ₃	H	O	5-F	4-F	4-OCF ₃
H	CH ₃	H	O	5-F	4-F	4-OCHF ₂

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	CH ₃	H	O	5-F	4-F	4-OCF ₂ Br
H	CH ₃	H	O	5-F	4-F	4-OCF ₂ CHF ₂
H	CH ₃	H	O	5-F	4-F	4-OSO ₂ CF ₃
H	CH ₃	H	O	H	4-F	4-OCF ₃
H	CH ₃	H	S	4-F	4-F	4-Cl
H	CH ₃	H	O	5-Cl	4-F	4-CF ₃
H	CH ₃	H	O	5-Br	4-F	4-OCF ₃
H	CH ₃	H	O	5-CF ₃	4-F	4-Cl
H	CH ₃	H	O	5-OCF ₃	4-F	4-CF ₃
H	CH ₃	H	O	5-OCHF ₂	4-F	4-OCF ₃
H	CH ₃	H	O	4-OCHF ₂	4-F	4-Cl
H	CH ₃	H	S	5-F	4-Cl	4-CF ₃
H	CH ₃	H	O	5-F	4-Br	4-OCF ₃
H	CH ₃	H	O	5-F	4-CF ₃	4-Cl
H	CH ₃	H	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
H	CH ₃	H	O	5-F	4-CN	4-OCF ₃
H	CH ₃	H	O	3-F	3,4-F ₂	4-Cl
H	CH ₃	H	O	5-CF ₃	4-CN	4-CF ₃
CH ₃	H	H	O	5-F	4-F	4-Cl
CH ₃	H	H	O	5-F	4-F	4-Br
CH ₃	H	H	O	5-F	4-F	4-CF ₃
CH ₃	H	H	O	5-F	4-F	4-OCF ₃
CH ₃	H	H	O	5-F	4-F	4-OCHF ₂
CH ₃	H	H	O	5-F	4-F	4-OCF ₂ Br
CH ₃	H	H	O	5-F	4-F	4-OCF ₂ CHF ₂
CH ₃	H	H	O	5-F	4-F	4-OSO ₂ CF ₃
CH ₃	H	H	O	H	4-F	4-OCF ₃
CH ₃	H	H	S	4-F	4-F	4-Cl
CH ₃	H	H	O	5-Cl	4-F	4-CF ₃
CH ₃	H	H	O	5-Br	4-F	4-OCF ₃
CH ₃	H	H	O	5-CF ₃	4-F	4-Cl
CH ₃	H	H	O	5-OCF ₃	4-F	4-CF ₃
CH ₃	H	H	O	5-OCHF ₂	4-F	4-OCF ₃
CH ₃	H	H	O	4-OCHF ₂	4-F	4-Cl
CH ₃	H	H	S	5-F	4-Cl	4-CF ₃
CH ₃	H	H	O	5-F	4-Br	4-OCF ₃
CH ₃	H	H	O	5-F	4-CF ₃	4-Cl
CH ₃	H	H	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
CH ₃	H	H	O	5-F	4-CN	4-OCF ₃
CH ₃	H	H	O	3-F	3,4-F ₂	4-Cl
CH ₃	H	H	O	5-CF ₃	4-CN	4-CF ₃

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	H	CH ₂ CH ₃	O	5-F	4-F	4-Cl
H	H	CH ₂ CH ₂ CH ₃	O	5-F	4-F	4-Br
H	H	CH ₂ CH ₂ CH ₂ CH ₃	O	5-F	4-F	4-CF ₃
H	H	CH(CH ₃) ₂	O	5-F	4-F	4-OCF ₃
H	H	C(CH ₃) ₃	O	5-F	4-F	4-OCHF ₂
H	H	CH ₂ CH=CH ₂	O	5-F	4-F	4-OCF ₂ Br
H	H	CH ₂ C≡CH	O	5-F	4-F	4-OCF ₂ CHF ₂
H	H	CH ₂ OCH ₃	O	5-F	4-F	4-OSO ₂ CF ₃
H	H	CH ₂ OCH ₂ CH ₃	O	H	4-F	4-OCF ₃
H	H	CH ₂ CH ₂ OCH ₃	O	4-F	4-F	4-Cl
H	H	CHF ₂	O	5-Cl	4-F	4-CF ₃
H	H	CF ₂ Br	O	5-Br	4-F	4-OCF ₃
H	H	CF ₃	O	5-CF ₃	4-F	4-Cl
H	H	COCH ₃	O	5-OCF ₃	4-F	4-CF ₃
H	H	COCF ₃	O	5-OCHF ₂	4-F	4-OCF ₃
H	H	CO ₂ CH ₃	O	4-OCHF ₂	4-F	4-Cl
H	H	CH ₂ C ₆ H ₅	O	5-F	4-Cl	4-CF ₃
H	H	SC ₆ H ₅	O	5-F	4-Br	4-OCF ₃
H	H	SCCl ₃	O	5-F	4-CF ₃	4-Cl
H	H	SCO ₂ CH ₂ CH ₃	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
H	H	S(C ₆ H ₄ -2-NO ₂)	O	5-F	4-CN	4-OCF ₃
H	H	SN(CH ₂ CH ₂ CH ₂ CH ₃) ₂	O	3-F	3,4-F ₂	4-Cl
H	H	SN(CH ₃)CO ₂ CH ₂ CH ₃	O	5-CF ₃	4-CN	4-CF ₃
H	CH ₂ CH ₃	H	O	5-F	4-F	4-Cl
H	CH ₂ CH ₂ CH ₃	H	O	5-F	4-F	4-Br
H	CH ₂ CH ₂ CH ₂ CH ₃	H	O	5-F	4-F	4-CF ₃
H	CH(CH ₃) ₂	H	O	5-F	4-F	4-OCF ₃
H	C(CH ₃) ₃	H	O	5-F	4-F	4-OCHF ₂
H	CH ₂ CH=CH ₂	H	O	5-F	4-F	4-OCF ₂ Br
H	CH ₂ C≡CH	H	O	5-F	4-F	4-OCF ₂ CHF ₂
H	CH ₂ OCH ₃	H	O	5-F	4-F	4-OSO ₂ CF ₃
H	CH ₂ OCH ₂ CH ₃	H	O	H	4-F	4-OCF ₃
H	CH ₂ CH ₂ OCH ₃	H	O	4-F	4-F	4-Cl
H	CHF ₂	H	O	5-Cl	4-F	4-CF ₃
H	CF ₂ Br	H	O	5-Br	4-F	4-OCF ₃
H	CF ₃	H	O	5-CF ₃	4-F	4-Cl
H	COCH ₃	H	O	5-OCF ₃	4-F	4-CF ₃
H	COCF ₃	H	O	5-OCHF ₂	4-F	4-OCF ₃
H	CO ₂ CH ₃	H	O	4-OCHF ₂	4-F	4-Cl
H	CH ₂ C ₆ H ₅	H	O	5-F	4-Cl	4-CF ₃
H	SC ₆ H ₅	H	O	5-F	4-Br	4-OCF ₃
H	SCCl ₃	H	O	5-F	4-CF ₃	4-Cl

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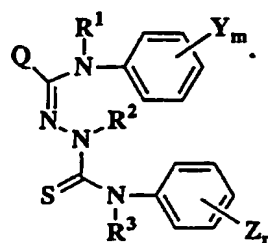
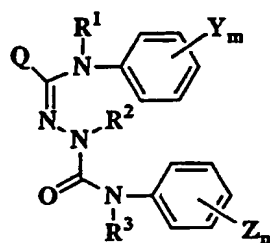
R ¹	R ²	R ³	W	X _k	Y _m	Z _n
H	SCO ₂ CH ₂ CH ₃	H	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
H	S(C ₆ H ₄ -2-NO ₂)	H	O	5-F	4-CN	4-OCF ₃
H	SN(CH ₂ CH ₂ CH ₂ CH ₃) ₂	H	O	3-F	3,4-F ₂	4-Cl
H	SN(CH ₃)CO ₂ CH ₂ CH ₃	H	O	5-CF ₃	4-CN	4-CF ₃
CH ₂ CH ₃	H	H	O	5-F	4-F	4-Cl
CH ₂ CH ₂ CH ₃	H	H	O	5-F	4-F	4-Br
CH ₂ CH ₂ CH ₂ CH ₃	H	H	O	5-F	4-F	4-CF ₃
CH(CH ₃) ₂	H	H	O	5-F	4-F	4-OCF ₃
C(CH ₃) ₃	H	H	O	5-F	4-F	4-OCHF ₂
Al	H	H	O	5-F	4-F	4-OCF ₂ Br
A4	H	H	O	5-F	4-F	4-OCF ₂ CHF ₂
F	H	H	O	5-F	4-F	4-OSO ₂ CF ₃
Cl	H	H	O	H	4-F	4-OCF ₃
Br	H	H	O	4-F	4-F	4-Cl
I	H	H	O	5-Cl	4-F	4-CF ₃
OH	H	H	O	5-Br	4-F	4-OCF ₃
CN	H	H	O	5-CF ₃	4-F	4-Cl
NO ₂	H	H	O	5-OCF ₃	4-F	4-CF ₃
CH ₂ F	H	H	O	5-OCHF ₂	4-F	4-OCF ₃
CF ₃	H	H	O	4-OCHF ₂	4-F	4-Cl
OCH ₃	H	H	O	5-F	4-Cl	4-CF ₃
OCH ₂ CH ₃	H	H	O	5-F	4-Br	4-OCF ₃
OCF ₃	H	H	O	5-F	4-CF ₃	4-Cl
SCH ₃	H	H	O	5-F	4-OSO ₂ CF ₃	4-CF ₃
SCF ₃	H	H	O	5-F	4-CN	4-OCF ₃
SO ₂ CH ₃	H	H	O	3-F	3,4-F ₂	4-Cl
SO ₂ CF ₃	H	H	O	5-CF ₃	4-CN	4-CF ₃
OSO ₂ CF ₃	H	H	O	5-F	4-F	4-Cl
CO ₂ CH ₂ CH ₃	H	H	O	5-F	4-F	4-Br
CO ₂ CH ₃	H	H	O	5-F	4-F	4-CF ₃
CH ₂ CO ₂ CH ₃	H	H	O	5-F	4-F	4-OCF ₃
N(CH ₃) ₂	H	H	O	5-F	4-F	4-OCHF ₂
C ₆ H ₅	H	H	O	5-F	4-F	4-OCF ₂ Br
C ₆ H ₄ -4-F	H	H	O	5-F	4-F	4-OCF ₂ CHF ₂
C ₆ H ₄ -4-Cl	H	H	O	5-F	4-F	4-OSO ₂ CF ₃
C ₆ H ₄ -4-Br	H	H	O	H	4-F	4-OCF ₃
C ₆ H ₄ -4-CN	H	H	O	4-F	4-F	4-Cl
C ₆ H ₄ -4-CF ₃	H	H	O	5-Cl	4-F	4-CF ₃
CH ₂ C ₆ H ₅	H	H	O	5-Br	4-F	4-OCF ₃
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-Cl
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-Br

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R ¹	R ²	R ³	W	X _k	Y _m	Z _n
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-CF ₃
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-OCF ₃
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-OCHF ₂
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-OCF ₂ Br
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-OCF ₂ CHF ₂
CH ₃	CH ₃	CH ₃	O	5-F	4-F	4-OSO ₂ CF ₃
CH ₃	CH ₃	CH ₃	O	H	4-F	4-OCF ₃
CH ₃	CH ₃	CH ₃	O	4-F	4-F	4-Cl
CH ₃	CH ₃	CH ₃	O	5-Cl	4-F	4-CF ₃
H	CH ₂ OCH ₃	CH ₃	O	5-F	4-F	4-Cl
H	COCH ₃	CH ₃	O	5-F	4-F	4-Br
H	CO ₂ CH ₃	CH ₃	O	5-F	4-F	4-CF ₃
H	CHF ₂	CH ₃	O	5-F	4-F	4-OCF ₃
H	CH ₂ C ₆ H ₅	CH ₃	O	5-F	4-F	4-OCHF ₂
H	SC ₆ H ₅	CH ₃	O	5-F	4-F	4-OCF ₂ Br
H	CH ₃	CH ₂ OCH ₃	O	5-F	4-F	4-OCF ₂ CHF ₂
H	CH ₃	COCH ₃	O	5-F	4-F	4-OSO ₂ CF ₃
H	CH ₃	CO ₂ CH ₃	O	H	4-F	4-OCF ₃
H	CH ₃	CHF ₂	O	4-F	4-F	4-Cl
H	CH ₃	CH ₂ C ₆ H ₅	O	5-Cl	4-F	4-CF ₃
H	CH ₃	SC ₆ H ₅	O	5-Br	4-F	4-OCF ₃
CH ₃	CH ₃	CH ₂ OCH ₃	O	5-CF ₃	4-F	4-Cl
CH ₃	CH ₃	COCH ₃	O	5-OCF ₃	4-F	4-CF ₃
CH ₃	CH ₃	CO ₂ CH ₃	O	5-OCHF ₂	4-F	4-OCF ₃
CH ₃	CH ₃	CHF ₂	O	4-OCHF ₂	4-F	4-Cl
CH ₃	CH ₃	CH ₂ C ₆ H ₅	O	5-F	4-Cl	4-CF ₃

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Table 2



wherein Q, R¹, R², R³, X_k, Y_m, and Z_n are identified in the following Table.

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	H	H	H	H	4-F	4-Cl
Q-5	H	H	H	H	4-F	4-CF ₃
Q-5	H	H	H	H	4-F	4-OCF ₃
Q-5	H	H	H	H	4-F	4-SF ₅
Q-5	H	H	H	H	4-Cl	4-Cl
Q-5	H	H	H	H	4-Cl	4-CF ₃
Q-5	H	H	H	H	4-Cl	4-OCF ₃
Q-5	H	H	H	H	4-Cl	4-SF ₅
Q-5	H	H	H	H	4-CN	4-Cl
Q-5	H	H	H	H	4-CN	4-CF ₃
Q-5	H	H	H	H	4-CN	4-OCF ₃
Q-5	H	H	H	H	4-CN	4-SF ₅
Q-5	H	H	H	H	4-CF ₃	4-Cl
Q-5	H	H	H	H	4-CF ₃	4-CF ₃
Q-5	H	H	H	H	4-CF ₃	4-OCF ₃
Q-5	H	H	H	H	4-CF ₃	4-SF ₅
Q-5	H	H	H	H	4-NO ₂	4-Cl
Q-5	H	H	H	H	4-NO ₂	4-CF ₃
Q-5	H	H	H	H	4-NO ₂	4-OCF ₃
Q-5	H	H	H	H	4-NO ₂	4-SF ₅
Q-5	H	H	H	3-Cl	4-F	4-Cl
Q-5	H	H	H	3-Cl	4-F	4-CF ₃
Q-5	H	H	H	3-Cl	4-F	4-OCF ₃
Q-5	H	H	H	3-Cl	4-F	4-SF ₅
Q-5	H	H	H	3-Cl	4-Cl	4-Cl
Q-5	H	H	H	3-Cl	4-Cl	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	H	H	H	3-Cl	4-Cl	4-OCF ₃
Q-5	H	H	H	3-Cl	4-Cl	4-SF ₅
Q-5	H	H	H	3-Cl	4-CN	4-Cl
Q-5	H	H	H	3-Cl	4-CN	4-CF ₃
Q-5	H	H	H	3-Cl	4-CN	4-OCF ₃
Q-5	H	H	H	3-Cl	4-CN	4-SF ₅
Q-5	H	H	H	3-Cl	4-CF ₃	4-Cl
Q-5	H	H	H	3-Cl	4-CF ₃	4-CF ₃
Q-5	H	H	H	3-Cl	4-CF ₃	4-OCF ₃
Q-5	H	H	H	3-Cl	4-CF ₃	4-SF ₅
Q-5	H	H	H	3-Cl	4-NO ₂	4-Cl
Q-5	H	H	H	3-Cl	4-NO ₂	4-CF ₃
Q-5	H	H	H	3-Cl	4-NO ₂	4-OCF ₃
Q-5	H	H	H	3-Cl	4-NO ₂	4-SF ₅
Q-5	H	H	H	3-CH ₃	4-F	4-Cl
Q-5	H	H	H	3-CH ₃	4-F	4-CF ₃
Q-5	H	H	H	3-CH ₃	4-F	4-OCF ₃
Q-5	H	H	H	3-CH ₃	4-F	4-SF ₅
Q-5	H	H	H	3-CH ₃	4-Cl	4-Cl
Q-5	H	H	H	3-CH ₃	4-Cl	4-CF ₃
Q-5	H	H	H	3-CH ₃	4-Cl	4-OCF ₃
Q-5	H	H	H	3-CH ₃	4-Cl	4-SF ₅
Q-5	H	H	H	3-CH ₃	4-CN	4-Cl
Q-5	H	H	H	3-CH ₃	4-CN	4-CF ₃
Q-5	H	H	H	3-CH ₃	4-CN	4-OCF ₃
Q-5	H	H	H	3-CH ₃	4-CN	4-SF ₅
Q-5	H	H	H	3-CH ₃	4-CF ₃	4-Cl
Q-5	H	H	H	3-CH ₃	4-CF ₃	4-CF ₃
Q-5	H	H	H	3-CH ₃	4-CF ₃	4-OCF ₃
Q-5	H	H	H	3-CH ₃	4-CF ₃	4-SF ₅
Q-5	H	H	H	3-CH ₃	4-NO ₂	4-Cl
Q-5	H	H	H	3-CH ₃	4-NO ₂	4-CF ₃
Q-5	H	H	H	3-CH ₃	4-NO ₂	4-OCF ₃
Q-5	H	H	H	3-CH ₃	4-NO ₂	4-SF ₅
Q-5	H	H	H	3-CF ₃	4-F	4-Cl
Q-5	H	H	H	3-CF ₃	4-F	4-CF ₃
Q-5	H	H	H	3-CF ₃	4-F	4-OCF ₃
Q-5	H	H	H	3-CF ₃	4-F	4-SF ₅
Q-5	H	H	H	3-CF ₃	4-Cl	4-Cl
Q-5	H	H	H	3-CF ₃	4-Cl	4-CF ₃
Q-5	H	H	H	3-CF ₃	4-Cl	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	H	H	H	3-CF ₃	4-Cl	4-SF ₅
Q-5	H	H	H	3-CF ₃	4-CN	4-Cl
Q-5	H	H	H	3-CF ₃	4-CN	4-CF ₃
Q-5	H	H	H	3-CF ₃	4-CN	4-OCF ₃
Q-5	H	H	H	3-CF ₃	4-CN	4-SF ₅
Q-5	H	H	H	3-CF ₃	4-CF ₃	4-Cl
Q-5	H	H	H	3-CF ₃	4-CF ₃	4-CF ₃
Q-5	H	H	H	3-CF ₃	4-CF ₃	4-OCF ₃
Q-5	H	H	H	3-CF ₃	4-CF ₃	4-SF ₅
Q-5	H	H	H	3-CF ₃	4-NO ₂	4-Cl
Q-5	H	H	H	3-CF ₃	4-NO ₂	4-CF ₃
Q-5	H	H	H	3-CF ₃	4-NO ₂	4-OCF ₃
Q-5	H	H	H	3-CF ₃	4-NO ₂	4-SF ₅
Q-5	H	H	H	3-NO ₂	4-F	4-Cl
Q-5	H	H	H	3-NO ₂	4-F	4-CF ₃
Q-5	H	H	H	3-NO ₂	4-F	4-OCF ₃
Q-5	H	H	H	3-NO ₂	4-F	4-SF ₅
Q-5	H	H	H	3-NO ₂	4-Cl	4-Cl
Q-5	H	H	H	3-NO ₂	4-Cl	4-CF ₃
Q-5	H	H	H	3-NO ₂	4-Cl	4-OCF ₃
Q-5	H	H	H	3-NO ₂	4-Cl	4-SF ₅
Q-5	H	H	H	3-NO ₂	4-CN	4-Cl
Q-5	H	H	H	3-NO ₂	4-CN	4-CF ₃
Q-5	H	H	H	3-NO ₂	4-CN	4-OCF ₃
Q-5	H	H	H	3-NO ₂	4-CN	4-SF ₅
Q-5	H	H	H	3-NO ₂	4-CF ₃	4-Cl
Q-5	H	H	H	3-NO ₂	4-CF ₃	4-CF ₃
Q-5	H	H	H	3-NO ₂	4-CF ₃	4-OCF ₃
Q-5	H	H	H	3-NO ₂	4-CF ₃	4-SF ₅
Q-5	H	H	H	3-NO ₂	4-NO ₂	4-Cl
Q-5	H	H	H	3-NO ₂	4-NO ₂	4-CF ₃
Q-5	H	H	H	3-NO ₂	4-NO ₂	4-OCF ₃
Q-5	H	H	H	3-NO ₂	4-NO ₂	4-SF ₅
Q-5	CH ₃	H	H	H	4-F	4-SF ₅
Q-5	CH ₃	H	H	H	4-Cl	4-Cl
Q-5	CH ₃	H	H	H	4-CN	4-CF ₃
Q-5	CH ₃	H	H	H	4-CF ₃	4-OCF ₃
Q-5	CH ₃	H	H	H	4-NO ₂	4-SF ₅
Q-5	CH ₃	H	H	3-Cl	4-F	4-Cl
Q-5	CH ₃	H	H	3-Cl	4-Cl	4-CF ₃
Q-5	CH ₃	H	H	3-Cl	4-CN	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	CH ₃	H	H	3-Cl	4-CF ₃	4-SF ₅
Q-5	CH ₃	H	H	3-Cl	4-NO ₂	4-Cl
Q-5	CH ₃	H	H	3-CH ₃	4-F	4-CF ₃
Q-5	CH ₃	H	H	3-CH ₃	4-Cl	4-OCF ₃
Q-5	CH ₃	H	H	3-CH ₃	4-CN	4-SF ₅
Q-5	CH ₃	H	H	3-CH ₃	4-CF ₃	4-Cl
Q-5	CH ₃	H	H	3-CH ₃	4-NO ₂	4-CF ₃
Q-5	CH ₃	H	H	3-CF ₃	4-F	4-OCF ₃
Q-5	CH ₃	H	H	3-CF ₃	4-Cl	4-SF ₅
Q-5	CH ₃	H	H	3-CF ₃	4-CN	4-Cl
Q-5	CH ₃	H	H	3-CF ₃	4-CF ₃	4-CF ₃
Q-5	CH ₃	H	H	3-CF ₃	4-NO ₂	4-OCF ₃
Q-5	CH ₃	H	H	3-NO ₂	4-F	4-SF ₅
Q-5	CH ₃	H	H	3-NO ₂	4-Cl	4-Cl
Q-5	CH ₃	H	H	3-NO ₂	4-CN	4-CF ₃
Q-5	CH ₃	H	H	3-NO ₂	4-CF ₃	4-OCF ₃
Q-5	CH ₃	H	H	3-NO ₂	4-NO ₂	4-SF ₅
Q-5	H	H	CH ₃	H	4-F	4-Cl
Q-5	H	H	CH ₃	H	4-Cl	4-CF ₃
Q-5	H	H	CH ₃	H	4-CN	4-OCF ₃
Q-5	H	H	CH ₃	H	4-CF ₃	4-SF ₅
Q-5	H	H	CH ₃	H	4-NO ₂	4-Cl
Q-5	H	H	CH ₃	3-Cl	4-F	4-CF ₃
Q-5	H	H	CH ₃	3-Cl	4-Cl	4-OCF ₃
Q-5	H	H	CH ₃	3-Cl	4-CN	4-SF ₅
Q-5	H	H	CH ₃	3-Cl	4-CF ₃	4-Cl
Q-5	H	H	CH ₃	3-Cl	4-NO ₂	4-CF ₃
Q-5	H	H	CH ₃	3-CH ₃	4-F	4-OCF ₃
Q-5	H	H	CH ₃	3-CH ₃	4-Cl	4-SF ₅
Q-5	H	H	CH ₃	3-CH ₃	4-CN	4-Cl
Q-5	H	H	CH ₃	3-CH ₃	4-CF ₃	4-CF ₃
Q-5	H	H	CH ₃	3-CH ₃	4-NO ₂	4-OCF ₃
Q-5	H	H	CH ₃	3-CF ₃	4-F	4-SF ₅
Q-5	H	H	CH ₃	3-CF ₃	4-Cl	4-Cl
Q-5	H	H	CH ₃	3-CF ₃	4-CN	4-CF ₃
Q-5	H	H	CH ₃	3-CF ₃	4-CF ₃	4-OCF ₃
Q-5	H	H	CH ₃	3-CF ₃	4-NO ₂	4-SF ₅
Q-5	H	H	CH ₃	3-NO ₂	4-F	4-Cl
Q-5	H	H	CH ₃	3-NO ₂	4-Cl	4-CF ₃
Q-5	H	H	CH ₃	3-NO ₂	4-CN	4-OCF ₃
Q-5	H	H	CH ₃	3-NO ₂	4-CF ₃	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	H	H	CH ₃	3-NO ₂	4-NO ₂	4-Cl
Q-5	H	H	COOCH ₃	H	4-F	4-Cl
Q-5	H	H	COOCH ₃	H	4-Cl	4-CF ₃
Q-5	H	H	COOCH ₃	H	4-CN	4-OCF ₃
Q-5	H	H	COOCH ₃	H	4-CF ₃	4-SF ₅
Q-5	H	H	COOCH ₃	H	4-NO ₂	4-Cl
Q-5	H	H	COOCH ₃	3-Cl	4-F	4-CF ₃
Q-5	H	H	COOCH ₃	3-Cl	4-Cl	4-OCF ₃
Q-5	H	H	COOCH ₃	3-Cl	4-CN	4-SF ₅
Q-5	H	H	COOCH ₃	3-Cl	4-CF ₃	4-Cl
Q-5	H	H	COOCH ₃	3-Cl	4-NO ₂	4-CF ₃
Q-5	H	H	COOCH ₃	3-CH ₃	4-F	4-OCF ₃
Q-5	H	H	COOCH ₃	3-CH ₃	4-Cl	4-SF ₅
Q-5	H	H	COOCH ₃	3-CH ₃	4-CN	4-Cl
Q-5	H	H	COOCH ₃	3-CH ₃	4-CF ₃	4-CF ₃
Q-5	H	H	COOCH ₃	3-CH ₃	4-NO ₂	4-OCF ₃
Q-5	H	H	COOCH ₃	3-CF ₃	4-F	4-SF ₅
Q-5	H	H	COOCH ₃	3-CF ₃	4-Cl	4-Cl
Q-5	H	H	COOCH ₃	3-CF ₃	4-CN	4-CF ₃
Q-5	H	H	COOCH ₃	3-CF ₃	4-CF ₃	4-OCF ₃
Q-5	H	H	COOCH ₃	3-CF ₃	4-NO ₂	4-SF ₅
Q-5	H	H	COOCH ₃	3-NO ₂	4-F	4-Cl
Q-5	H	H	COOCH ₃	3-NO ₂	4-Cl	4-CF ₃
Q-5	H	H	COOCH ₃	3-NO ₂	4-CN	4-OCF ₃
Q-5	H	H	COOCH ₃	3-NO ₂	4-CF ₃	4-SF ₅
Q-5	H	H	COOCH ₃	3-NO ₂	4-NO ₂	4-Cl
Q-5	CH ₃	H	CH ₃	H	4-F	4-CF ₃
Q-5	CH ₃	H	CH ₃	H	4-Cl	4-OCF ₃
Q-5	CH ₃	H	CH ₃	H	4-CN	4-SF ₅
Q-5	CH ₃	H	CH ₃	H	4-CF ₃	4-Cl
Q-5	CH ₃	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-5	CH ₃	H	CH ₃	3-Cl	4-F	4-OCF ₃
Q-5	CH ₃	H	CH ₃	3-Cl	4-Cl	4-SF ₅
Q-5	CH ₃	H	CH ₃	3-Cl	4-CN	4-Cl
Q-5	CH ₃	H	CH ₃	3-Cl	4-CF ₃	4-CF ₃
Q-5	CH ₃	H	CH ₃	3-Cl	4-NO ₂	4-OCF ₃
Q-5	CH ₃	H	CH ₃	3-CH ₃	4-F	4-SF ₅
Q-5	CH ₃	H	CH ₃	3-CH ₃	4-Cl	4-Cl
Q-5	CH ₃	H	CH ₃	3-CH ₃	4-CN	4-CF ₃
Q-5	CH ₃	H	CH ₃	3-CH ₃	4-CF ₃	4-OCF ₃
Q-5	CH ₃	H	CH ₃	3-CH ₃	4-NO ₂	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-5	CH ₃	H	CH ₃	3-CF ₃	4-F	4-Cl
Q-5	CH ₃	H	CH ₃	3-CF ₃	4-Cl	4-CF ₃
Q-5	CH ₃	H	CH ₃	3-CF ₃	4-CN	4-OCF ₃
Q-5	CH ₃	H	CH ₃	3-CF ₃	4-CF ₃	4-SF ₅
Q-5	CH ₃	H	CH ₃	3-CF ₃	4-NO ₂	4-Cl
Q-5	CH ₃	H	CH ₃	3-NO ₂	4-F	4-CF ₃
Q-5	CH ₃	H	CH ₃	3-NO ₂	4-Cl	4-OCF ₃
Q-5	CH ₃	H	CH ₃	3-NO ₂	4-CN	4-SF ₅
Q-5	CH ₃	H	CH ₃	3-NO ₂	4-CF ₃	4-Cl
Q-5	CH ₃	H	CH ₃	3-NO ₂	4-NO ₂	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	H	4-F	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	H	4-Cl	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	H	4-CN	4-Cl
Q-5	CH ₃	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	H	4-NO ₂	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	3-Cl	4-F	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	3-Cl	4-Cl	4-Cl
Q-5	CH ₃	H	COOCH ₃	3-Cl	4-CN	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	3-Cl	4-CF ₃	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	3-Cl	4-NO ₂	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	3-CH ₃	4-F	4-Cl
Q-5	CH ₃	H	COOCH ₃	3-CH ₃	4-Cl	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	3-CH ₃	4-CN	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	3-CH ₃	4-CF ₃	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	3-CH ₃	4-NO ₂	4-Cl
Q-5	CH ₃	H	COOCH ₃	3-CF ₃	4-F	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	3-CF ₃	4-Cl	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	3-CF ₃	4-CN	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	3-CF ₃	4-CF ₃	4-Cl
Q-5	CH ₃	H	COOCH ₃	3-CF ₃	4-NO ₂	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	3-NO ₂	4-F	4-OCF ₃
Q-5	CH ₃	H	COOCH ₃	3-NO ₂	4-Cl	4-SF ₅
Q-5	CH ₃	H	COOCH ₃	3-NO ₂	4-CN	4-Cl
Q-5	CH ₃	H	COOCH ₃	3-NO ₂	4-CF ₃	4-CF ₃
Q-5	CH ₃	H	COOCH ₃	3-NO ₂	4-NO ₂	4-OCF ₃

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Q	R ¹	R ²	R ³	R ⁴	Xk	Ym	Zn
Q-6	H	H	H	H	H	4-CN	4-Cl
Q-6	H	H	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-6	H	H	H	CH ₂ OCH ₃	H	4-NO ₂	4-OCF ₃
Q-6	H	H	H	CH ₂ OC ₂ H ₅	H	4-CN	4-OCF ₃
Q-6	CH ₃	H	H	CH ₂ OC ₂ H ₅	H	4-CF ₃	4-Cl
Q-6	H	H	CH ₃	CH ₂ OC ₂ H ₅	H	4-NO ₂	4-CF ₃
Q-6	H	H	COOCH ₃	CH ₂ OC ₂ H ₅	H	4-CN	4-OCF ₃
Q-6	CH ₃	H	CH ₃	CH ₂ OC ₂ H ₅	H	4-CF ₃	4-OCF ₃
Q-6	CH ₃	H	COOCH ₃	CH ₂ OC ₂ H ₅	H	4-NO ₂	4-Cl
Q-7	H	H	H	H	H	4-CN	4-Cl
Q-7	H	H	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-7	H	H	H	CH ₂ F	H	4-NO ₂	4-OCF ₃
Q-7	H	H	H	CHF ₂	H	4-CN	4-OCF ₃
Q-7	H	H	H	CF ₂ Br	H	4-CF ₃	4-Cl
Q-7	H	H	H	CF ₃	H	4-NO ₂	4-CF ₃
Q-7	H	H	H	CF ₃	H	4-CN	4-OCF ₃
Q-7	H	H	H	CF ₃	H	4-CF ₃	4-OCF ₃
Q-7	H	H	H	CH ₂ CF ₃	H	4-NO ₂	4-Cl
Q-7	CH ₃	H	H	CH ₃	H	4-CN	4-CF ₃
Q-7	H	H	CH ₃	CH ₃	H	4-CF ₃	4-OCF ₃
Q-7	H	H	COOCH ₃	CH ₃	H	4-NO ₂	4-OCF ₃
Q-7	CH ₃	H	CH ₃	CH ₃	H	4-CN	4-Cl
Q-7	CH ₃	H	COOCH ₃	CH ₃	H	4-CF ₃	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	H	H	4-F	4-Cl
Q-8	H	H	H	H	4-F	4-CF ₃
Q-8	H	H	H	H	4-F	4-OCF ₃
Q-8	H	H	H	H	4-F	4-SF ₅
Q-8	H	H	H	H	4-Cl	4-Cl
Q-8	H	H	H	H	4-Cl	4-CF ₃
Q-8	H	H	H	H	4-Cl	4-OCF ₃
Q-8	H	H	H	H	4-Cl	4-SF ₅
Q-8	H	H	H	H	4-CN	4-Cl
Q-8	H	H	H	H	4-CN	4-CF ₃
Q-8	H	H	H	H	4-CN	4-OCF ₃
Q-8	H	H	H	H	4-CN	4-SF ₅
Q-8	H	H	H	H	4-CF ₃	4-Cl
Q-8	H	H	H	H	4-CF ₃	4-CF ₃
Q-8	H	H	H	H	4-CF ₃	4-OCF ₃
Q-8	H	H	H	H	4-CF ₃	4-SF ₅
Q-8	H	H	H	H	4-NO ₂	4-Cl
Q-8	H	H	H	H	4-NO ₂	4-CF ₃
Q-8	H	H	H	H	4-NO ₂	4-OCF ₃
Q-8	H	H	H	H	4-NO ₂	4-SF ₅
Q-8	H	H	H	4-Cl	4-F	4-Cl
Q-8	H	H	H	4-Cl	4-F	4-CF ₃
Q-8	H	H	H	4-Cl	4-F	4-OCF ₃
Q-8	H	H	H	4-Cl	4-F	4-SF ₅
Q-8	H	H	H	4-Cl	4-Cl	4-Cl
Q-8	H	H	H	4-Cl	4-Cl	4-CF ₃
Q-8	H	H	H	4-Cl	4-Cl	4-OCF ₃
Q-8	H	H	H	4-Cl	4-Cl	4-SF ₅
Q-8	H	H	H	4-Cl	4-CN	4-Cl
Q-8	H	H	H	4-Cl	4-CN	4-CF ₃
Q-8	H	H	H	4-Cl	4-CN	4-OCF ₃
Q-8	H	H	H	4-Cl	4-CN	4-SF ₅
Q-8	H	H	H	4-Cl	4-CF ₃	4-Cl
Q-8	H	H	H	4-Cl	4-CF ₃	4-CF ₃
Q-8	H	H	H	4-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	H	4-Cl	4-CF ₃	4-SF ₅
Q-8	H	H	H	4-Cl	4-NO ₂	4-Cl
Q-8	H	H	H	4-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	H	4-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	H	4-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	H	4-Br	4-F	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	H	4-Br	4-F	4-CF ₃
Q-8	H	H	H	4-Br	4-F	4-OCF ₃
Q-8	H	H	H	4-Br	4-F	4-SF ₅
Q-8	H	H	H	4-Br	4-Cl	4-Cl
Q-8	H	H	H	4-Br	4-Cl	4-CF ₃
Q-8	H	H	H	4-Br	4-Cl	4-OCF ₃
Q-8	H	H	H	4-Br	4-Cl	4-SF ₅
Q-8	H	H	H	4-Br	4-CN	4-Cl
Q-8	H	H	H	4-Br	4-CN	4-CF ₃
Q-8	H	H	H	4-Br	4-CN	4-OCF ₃
Q-8	H	H	H	4-Br	4-CN	4-SF ₅
Q-8	H	H	H	4-Br	4-CF ₃	4-Cl
Q-8	H	H	H	4-Br	4-CF ₃	4-CF ₃
Q-8	H	H	H	4-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	H	4-Br	4-CF ₃	4-SF ₅
Q-8	H	H	H	4-Br	4-NO ₂	4-Cl
Q-8	H	H	H	4-Br	4-NO ₂	4-CF ₃
Q-8	H	H	H	4-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	H	4-Br	4-NO ₂	4-SF ₅
Q-8	H	H	H	4-CH ₃	4-F	4-Cl
Q-8	H	H	H	4-CH ₃	4-F	4-CF ₃
Q-8	H	H	H	4-CH ₃	4-F	4-OCF ₃
Q-8	H	H	H	4-CH ₃	4-F	4-SF ₅
Q-8	H	H	H	4-CH ₃	4-Cl	4-Cl
Q-8	H	H	H	4-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	H	4-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	H	4-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	H	4-CH ₃	4-CN	4-Cl
Q-8	H	H	H	4-CH ₃	4-CN	4-CF ₃
Q-8	H	H	H	4-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	H	4-CH ₃	4-CN	4-SF ₅
Q-8	H	H	H	4-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	H	4-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	H	4-CH ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	H	4-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	H	4-CH ₃	4-NO ₂	4-Cl
Q-8	H	H	H	4-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	H	4-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	H	4-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	H	4-CF ₃	4-F	4-Cl
Q-8	H	H	H	4-CF ₃	4-F	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	H	4-CF ₃	4-F	4-OCF ₃
Q-8	H	H	H	4-CF ₃	4-F	4-SF ₅
Q-8	H	H	H	4-CF ₃	4-Cl	4-Cl
Q-8	H	H	H	4-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	H	4-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	H	4-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	H	4-CF ₃	4-CN	4-Cl
Q-8	H	H	H	4-CF ₃	4-CN	4-CF ₃
Q-8	H	H	H	4-CF ₃	4-CN	4-OCF ₃
Q-8	H	H	H	4-CF ₃	4-CN	4-SF ₅
Q-8	H	H	H	4-CF ₃	4-CF ₃	4-Cl
Q-8	H	H	H	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	H	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	H	4-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	H	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	H	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	H	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	H	H	5-Cl	4-F	4-Cl
Q-8	H	H	H	5-Cl	4-F	4-CF ₃
Q-8	H	H	H	5-Cl	4-F	4-OCF ₃
Q-8	H	H	H	5-Cl	4-F	4-SF ₅
Q-8	H	H	H	5-Cl	4-Cl	4-Cl
Q-8	H	H	H	5-Cl	4-Cl	4-CF ₃
Q-8	H	H	H	5-Cl	4-Cl	4-OCF ₃
Q-8	H	H	H	5-Cl	4-Cl	4-SF ₅
Q-8	H	H	H	5-Cl	4-CN	4-Cl
Q-8	H	H	H	5-Cl	4-CN	4-CF ₃
Q-8	H	H	H	5-Cl	4-CN	4-OCF ₃
Q-8	H	H	H	5-Cl	4-CN	4-SF ₅
Q-8	H	H	H	5-Cl	4-CF ₃	4-Cl
Q-8	H	H	H	5-Cl	4-CF ₃	4-CF ₃
Q-8	H	H	H	5-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	H	5-Cl	4-CF ₃	4-SF ₅
Q-8	H	H	H	5-Cl	4-NO ₂	4-Cl
Q-8	H	H	H	5-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	H	5-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	H	5-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	H	5-Br	4-F	4-Cl
Q-8	H	H	H	5-Br	4-F	4-CF ₃
Q-8	H	H	H	5-Br	4-F	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	H	5-Br	4-F	4-SF ₅
Q-8	H	H	H	5-Br	4-Cl	4-Cl
Q-8	H	H	H	5-Br	4-Cl	4-CF ₃
Q-8	H	H	H	5-Br	4-Cl	4-OCF ₃
Q-8	H	H	H	5-Br	4-Cl	4-SF ₅
Q-8	H	H	H	5-Br	4-CN	4-Cl
Q-8	H	H	H	5-Br	4-CN	4-CF ₃
Q-8	H	H	H	5-Br	4-CN	4-OCF ₃
Q-8	H	H	H	5-Br	4-CN	4-SF ₅
Q-8	H	H	H	5-Br	4-CF ₃	4-Cl
Q-8	H	H	H	5-Br	4-CF ₃	4-CF ₃
Q-8	H	H	H	5-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	H	5-Br	4-CF ₃	4-SF ₅
Q-8	H	H	H	5-Br	4-NO ₂	4-Cl
Q-8	H	H	H	5-Br	4-NO ₂	4-CF ₃
Q-8	H	H	H	5-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	H	5-Br	4-NO ₂	4-SF ₅
Q-8	H	H	H	5-CH ₃	4-F	4-Cl
Q-8	H	H	H	5-CH ₃	4-F	4-CF ₃
Q-8	H	H	H	5-CH ₃	4-F	4-OCF ₃
Q-8	H	H	H	5-CH ₃	4-F	4-SF ₅
Q-8	H	H	H	5-CH ₃	4-Cl	4-Cl
Q-8	H	H	H	5-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	H	5-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	H	5-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	H	5-CH ₃	4-CN	4-Cl
Q-8	H	H	H	5-CH ₃	4-CN	4-CF ₃
Q-8	H	H	H	5-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	H	5-CH ₃	4-CN	4-SF ₅
Q-8	H	H	H	5-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	H	5-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	H	5-CH ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	H	5-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	H	5-CH ₃	4-NO ₂	4-Cl
Q-8	H	H	H	5-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	H	5-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	H	5-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	H	5-CF ₃	4-F	4-Cl
Q-8	H	H	H	5-CF ₃	4-F	4-CF ₃
Q-8	H	H	H	5-CF ₃	4-F	4-OCF ₃
Q-8	H	H	H	5-CF ₃	4-F	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	H	5-CF ₃	4-Cl	4-Cl
Q-8	H	H	H	5-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	H	5-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	H	5-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	H	5-CF ₃	4-CN	4-Cl
Q-8	H	H	H	5-CF ₃	4-CN	4-CF ₃
Q-8	H	H	H	5-CF ₃	4-CN	4-OCF ₃
Q-8	H	H	H	5-CF ₃	4-CN	4-SF ₅
Q-8	H	H	H	5-CF ₃	4-CF ₃	4-Cl
Q-8	H	H	H	5-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	H	5-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	H	5-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	H	5-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	H	5-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	H	5-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	H	5-CF ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	H	4-F	4-Cl
Q-8	CH ₃	H	H	H	4-F	4-CF ₃
Q-8	CH ₃	H	H	H	4-F	4-OCF ₃
Q-8	CH ₃	H	H	H	4-F	4-SF ₅
Q-8	CH ₃	H	H	H	4-Cl	4-Cl
Q-8	CH ₃	H	H	H	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	H	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	H	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	H	4-CN	4-Cl
Q-8	CH ₃	H	H	H	4-CN	4-CF ₃
Q-8	CH ₃	H	H	H	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	H	4-CN	4-SF ₅
Q-8	CH ₃	H	H	H	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	H	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	H	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	H	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	H	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	H	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	H	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	H	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	4-Cl	4-F	4-Cl
Q-8	CH ₃	H	H	4-Cl	4-F	4-CF ₃
Q-8	CH ₃	H	H	4-Cl	4-F	4-OCF ₃
Q-8	CH ₃	H	H	4-Cl	4-F	4-SF ₅
Q-8	CH ₃	H	H	4-Cl	4-Cl	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	H	4-Cl	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	4-Cl	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	4-Cl	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	4-Cl	4-CN	4-Cl
Q-8	CH ₃	H	H	4-Cl	4-CN	4-CF ₃
Q-8	CH ₃	H	H	4-Cl	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	4-Cl	4-CN	4-SF ₅
Q-8	CH ₃	H	H	4-Cl	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	4-Cl	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	4-Cl	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	4-Cl	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	4-Cl	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	4-Cl	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	4-Cl	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	4-Cl	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	4-Br	4-F	4-Cl
Q-8	CH ₃	H	H	4-Br	4-F	4-CF ₃
Q-8	CH ₃	H	H	4-Br	4-F	4-OCF ₃
Q-8	CH ₃	H	H	4-Br	4-F	4-SF ₅
Q-8	CH ₃	H	H	4-Br	4-Cl	4-Cl
Q-8	CH ₃	H	H	4-Br	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	4-Br	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	4-Br	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	4-Br	4-CN	4-Cl
Q-8	CH ₃	H	H	4-Br	4-CN	4-CF ₃
Q-8	CH ₃	H	H	4-Br	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	4-Br	4-CN	4-SF ₅
Q-8	CH ₃	H	H	4-Br	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	4-Br	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	4-Br	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	4-Br	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	4-Br	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	4-Br	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	4-Br	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	4-Br	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	4-CH ₃	4-F	4-Cl
Q-8	CH ₃	H	H	4-CH ₃	4-F	4-CF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-F	4-SF ₅
Q-8	CH ₃	H	H	4-CH ₃	4-Cl	4-Cl
Q-8	CH ₃	H	H	4-CH ₃	4-Cl	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	H	4-CH ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	4-CH ₃	4-CN	4-Cl
Q-8	CH ₃	H	H	4-CH ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	H	4-CH ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	4-CH ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	4-CH ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	4-CH ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	4-CH ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	4-CF ₃	4-F	4-Cl
Q-8	CH ₃	H	H	4-CF ₃	4-F	4-CF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-F	4-SF ₅
Q-8	CH ₃	H	H	4-CF ₃	4-Cl	4-Cl
Q-8	CH ₃	H	H	4-CF ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	4-CF ₃	4-CN	4-Cl
Q-8	CH ₃	H	H	4-CF ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	H	4-CF ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	4-CF ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	5-Cl	4-F	4-Cl
Q-8	CH ₃	H	H	5-Cl	4-F	4-CF ₃
Q-8	CH ₃	H	H	5-Cl	4-F	4-OCF ₃
Q-8	CH ₃	H	H	5-Cl	4-F	4-SF ₅
Q-8	CH ₃	H	H	5-Cl	4-Cl	4-Cl
Q-8	CH ₃	H	H	5-Cl	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	5-Cl	4-Cl	4-OCF ₃

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Q	R ¹	R ²	R ³	X _x	Y _m	Z _n
Q-8	CH ₃	H	H	5-Cl	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	5-Cl	4-CN	4-Cl
Q-8	CH ₃	H	H	5-Cl	4-CN	4-CF ₃
Q-8	CH ₃	H	H	5-Cl	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	5-Cl	4-CN	4-SF ₅
Q-8	CH ₃	H	H	5-Cl	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	5-Cl	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	5-Cl	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	5-Cl	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	5-Cl	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	5-Cl	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	5-Cl	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	5-Cl	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	5-Br	4-F	4-Cl
Q-8	CH ₃	H	H	5-Br	4-F	4-CF ₃
Q-8	CH ₃	H	H	5-Br	4-F	4-OCF ₃
Q-8	CH ₃	H	H	5-Br	4-F	4-SF ₅
Q-8	CH ₃	H	H	5-Br	4-Cl	4-Cl
Q-8	CH ₃	H	H	5-Br	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	5-Br	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	5-Br	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	5-Br	4-CN	4-Cl
Q-8	CH ₃	H	H	5-Br	4-CN	4-CF ₃
Q-8	CH ₃	H	H	5-Br	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	5-Br	4-CN	4-SF ₅
Q-8	CH ₃	H	H	5-Br	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	5-Br	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	5-Br	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	5-Br	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	5-Br	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	5-Br	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	5-Br	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	5-Br	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	5-CH ₃	4-F	4-Cl
Q-8	CH ₃	H	H	5-CH ₃	4-F	4-CF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-F	4-SF ₅
Q-8	CH ₃	H	H	5-CH ₃	4-Cl	4-Cl
Q-8	CH ₃	H	H	5-CH ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-Cl	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	H	5-CH ₃	4-CN	4-Cl
Q-8	CH ₃	H	H	5-CH ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	H	5-CH ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	5-CH ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	5-CH ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	5-CH ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	5-CH ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	H	5-CF ₃	4-F	4-Cl
Q-8	CH ₃	H	H	5-CF ₃	4-F	4-CF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-F	4-SF ₅
Q-8	CH ₃	H	H	5-CF ₃	4-Cl	4-Cl
Q-8	CH ₃	H	H	5-CF ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	H	5-CF ₃	4-CN	4-Cl
Q-8	CH ₃	H	H	5-CF ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	H	5-CF ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	H	5-CF ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	H	5-CF ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	H	5-CF ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	H	5-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	H	4-F	4-Cl
Q-8	H	H	CH ₃	H	4-F	4-CF ₃
Q-8	H	H	CH ₃	H	4-F	4-OCF ₃
Q-8	H	H	CH ₃	H	4-F	4-SF ₅
Q-8	H	H	CH ₃	H	4-Cl	4-Cl
Q-8	H	H	CH ₃	H	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	H	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	H	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	H	4-CN	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	CH ₃	H	4-CN	4-CF ₃
Q-8	H	H	CH ₃	H	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	H	4-CN	4-SF ₅
Q-8	H	H	CH ₃	H	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	H	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	H	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	H	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	H	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	H	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	4-Cl	4-F	4-Cl
Q-8	H	H	CH ₃	4-Cl	4-F	4-CF ₃
Q-8	H	H	CH ₃	4-Cl	4-F	4-OCF ₃
Q-8	H	H	CH ₃	4-Cl	4-F	4-SF ₅
Q-8	H	H	CH ₃	4-Cl	4-Cl	4-Cl
Q-8	H	H	CH ₃	4-Cl	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	4-Cl	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	4-Cl	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	4-Cl	4-CN	4-Cl
Q-8	H	H	CH ₃	4-Cl	4-CN	4-CF ₃
Q-8	H	H	CH ₃	4-Cl	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	4-Cl	4-CN	4-SF ₅
Q-8	H	H	CH ₃	4-Cl	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	4-Cl	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	4-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	4-Cl	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	4-Cl	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	4-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	4-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	4-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	4-Br	4-F	4-Cl
Q-8	H	H	CH ₃	4-Br	4-F	4-CF ₃
Q-8	H	H	CH ₃	4-Br	4-F	4-OCF ₃
Q-8	H	H	CH ₃	4-Br	4-F	4-SF ₅
Q-8	H	H	CH ₃	4-Br	4-Cl	4-Cl
Q-8	H	H	CH ₃	4-Br	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	4-Br	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	4-Br	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	4-Br	4-CN	4-Cl
Q-8	H	H	CH ₃	4-Br	4-CN	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	CH ₃	4-Br	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	4-Br	4-CN	4-SF ₅
Q-8	H	H	CH ₃	4-Br	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	4-Br	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	4-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	4-Br	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	4-Br	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	4-Br	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	4-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	4-Br	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	4-CH ₃	4-F	4-Cl
Q-8	H	H	CH ₃	4-CH ₃	4-F	4-CF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-F	4-OCF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-F	4-SF ₅
Q-8	H	H	CH ₃	4-CH ₃	4-Cl	4-Cl
Q-8	H	H	CH ₃	4-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	4-CH ₃	4-CN	4-Cl
Q-8	H	H	CH ₃	4-CH ₃	4-CN	4-CF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-CN	4-SF ₅
Q-8	H	H	CH ₃	4-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	4-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	4-CH ₃	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	4-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	4-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	4-CF ₃	4-F	4-Cl
Q-8	H	H	CH ₃	4-CF ₃	4-F	4-CF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-F	4-OCF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-F	4-SF ₅
Q-8	H	H	CH ₃	4-CF ₃	4-Cl	4-Cl
Q-8	H	H	CH ₃	4-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	4-CF ₃	4-CN	4-Cl
Q-8	H	H	CH ₃	4-CF ₃	4-CN	4-CF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-CN	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	CH ₃	4-CF ₃	4-CN	4-SF ₅
Q-8	H	H	CH ₃	4-CF ₃	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	4-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	5-Cl	4-F	4-Cl
Q-8	H	H	CH ₃	5-Cl	4-F	4-CF ₃
Q-8	H	H	CH ₃	5-Cl	4-F	4-OCF ₃
Q-8	H	H	CH ₃	5-Cl	4-F	4-SF ₅
Q-8	H	H	CH ₃	5-Cl	4-Cl	4-Cl
Q-8	H	H	CH ₃	5-Cl	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	5-Cl	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	5-Cl	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	5-Cl	4-CN	4-Cl
Q-8	H	H	CH ₃	5-Cl	4-CN	4-CF ₃
Q-8	H	H	CH ₃	5-Cl	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	5-Cl	4-CN	4-SF ₅
Q-8	H	H	CH ₃	5-Cl	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	5-Cl	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	5-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	5-Cl	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	5-Cl	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	5-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	5-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	5-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	5-Br	4-F	4-Cl
Q-8	H	H	CH ₃	5-Br	4-F	4-CF ₃
Q-8	H	H	CH ₃	5-Br	4-F	4-OCF ₃
Q-8	H	H	CH ₃	5-Br	4-F	4-SF ₅
Q-8	H	H	CH ₃	5-Br	4-Cl	4-Cl
Q-8	H	H	CH ₃	5-Br	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	5-Br	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	5-Br	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	5-Br	4-CN	4-Cl
Q-8	H	H	CH ₃	5-Br	4-CN	4-CF ₃
Q-8	H	H	CH ₃	5-Br	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	5-Br	4-CN	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	CH ₃	5-Br	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	5-Br	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	5-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	5-Br	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	5-Br	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	5-Br	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	5-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	5-Br	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	5-CH ₃	4-F	4-Cl
Q-8	H	H	CH ₃	5-CH ₃	4-F	4-CF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-F	4-OCF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-F	4-SF ₅
Q-8	H	H	CH ₃	5-CH ₃	4-Cl	4-Cl
Q-8	H	H	CH ₃	5-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	5-CH ₃	4-CN	4-Cl
Q-8	H	H	CH ₃	5-CH ₃	4-CN	4-CF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-CN	4-SF ₅
Q-8	H	H	CH ₃	5-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	CH ₃	5-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	5-CH ₃	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	5-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	5-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	CH ₃	5-CF ₃	4-F	4-Cl
Q-8	H	H	CH ₃	5-CF ₃	4-F	4-CF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-F	4-OCF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-F	4-SF ₅
Q-8	H	H	CH ₃	5-CF ₃	4-Cl	4-Cl
Q-8	H	H	CH ₃	5-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	CH ₃	5-CF ₃	4-CN	4-Cl
Q-8	H	H	CH ₃	5-CF ₃	4-CN	4-CF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-CN	4-OCF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-CN	4-SF ₅
Q-8	H	H	CH ₃	5-CF ₃	4-CF ₃	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	CH ₃	5-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	CH ₃	5-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	CH ₃	5-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	CH ₃	5-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	H	4-F	4-Cl
Q-8	H	H	COOCH ₃	H	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	H	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	H	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	H	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	H	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	H	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	H	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	H	4-CN	4-Cl
Q-8	H	H	COOCH ₃	H	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	H	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	H	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	H	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	H	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	H	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	H	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	H	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	H	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	H	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	4-Cl	4-F	4-Cl
Q-8	H	H	COOCH ₃	4-Cl	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	4-Cl	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	4-Cl	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	4-Cl	4-CN	4-Cl
Q-8	H	H	COOCH ₃	4-Cl	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	4-Cl	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	4-Cl	4-CF ₃	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	COOCH ₃	4-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	4-Cl	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	4-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	4-Br	4-F	4-Cl
Q-8	H	H	COOCH ₃	4-Br	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	4-Br	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Br	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	4-Br	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	4-Br	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	4-Br	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Br	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	4-Br	4-CN	4-Cl
Q-8	H	H	COOCH ₃	4-Br	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	4-Br	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Br	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	4-Br	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	4-Br	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	4-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Br	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	4-Br	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	4-Br	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	4-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	4-Br	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	4-CH ₃	4-F	4-Cl
Q-8	H	H	COOCH ₃	4-CH ₃	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	4-CH ₃	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	4-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	4-CH ₃	4-CN	4-Cl
Q-8	H	H	COOCH ₃	4-CH ₃	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	4-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	4-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-CF ₃	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	COOCH ₃	4-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	4-CH ₃	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	4-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	4-CF ₃	4-F	4-Cl
Q-8	H	H	COOCH ₃	4-CF ₃	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	4-CF ₃	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	4-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	4-CF ₃	4-CN	4-Cl
Q-8	H	H	COOCH ₃	4-CF ₃	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	4-CF ₃	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	4-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	5-Cl	4-F	4-Cl
Q-8	H	H	COOCH ₃	5-Cl	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	5-Cl	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	5-Cl	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	5-Cl	4-CN	4-Cl
Q-8	H	H	COOCH ₃	5-Cl	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	5-Cl	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	5-Cl	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-CF ₃	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	COOCH ₃	5-Cl	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	5-Cl	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Cl	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	5-Br	4-F	4-Cl
Q-8	H	H	COOCH ₃	5-Br	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	5-Br	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Br	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	5-Br	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	5-Br	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	5-Br	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Br	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	5-Br	4-CN	4-Cl
Q-8	H	H	COOCH ₃	5-Br	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	5-Br	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Br	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	5-Br	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	5-Br	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	5-Br	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Br	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	5-Br	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	5-Br	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	5-Br	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	5-Br	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	5-CH ₃	4-F	4-Cl
Q-8	H	H	COOCH ₃	5-CH ₃	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	5-CH ₃	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	5-CH ₃	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	5-CH ₃	4-CN	4-Cl
Q-8	H	H	COOCH ₃	5-CH ₃	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	5-CH ₃	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	5-CH ₃	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	5-CH ₃	4-NO ₂	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	H	COOCH ₃	5-CH ₃	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CH ₃	4-NO ₂	4-SF ₅
Q-8	H	H	COOCH ₃	5-CF ₃	4-F	4-Cl
Q-8	H	H	COOCH ₃	5-CF ₃	4-F	4-CF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-F	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-F	4-SF ₅
Q-8	H	H	COOCH ₃	5-CF ₃	4-Cl	4-Cl
Q-8	H	H	COOCH ₃	5-CF ₃	4-Cl	4-CF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-Cl	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-Cl	4-SF ₅
Q-8	H	H	COOCH ₃	5-CF ₃	4-CN	4-Cl
Q-8	H	H	COOCH ₃	5-CF ₃	4-CN	4-CF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-CN	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-CN	4-SF ₅
Q-8	H	H	COOCH ₃	5-CF ₃	4-CF ₃	4-Cl
Q-8	H	H	COOCH ₃	5-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	H	COOCH ₃	5-CF ₃	4-NO ₂	4-Cl
Q-8	H	H	COOCH ₃	5-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	H	COOCH ₃	5-CF ₃	4-NO ₂	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	H	4-F	4-Cl
Q-8	H	COOC ₂ H ₅	H	H	4-F	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-F	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-F	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	H	4-Cl	4-Cl
Q-8	H	COOC ₂ H ₅	H	H	4-Cl	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-Cl	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-Cl	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	H	4-CN	4-Cl
Q-8	H	COOC ₂ H ₅	H	H	4-CN	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-CN	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-CN	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	H	4-CF ₃	4-Cl
Q-8	H	COOC ₂ H ₅	H	H	4-CF ₃	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-CF ₃	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-CF ₃	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	H	4-NO ₂	4-Cl
Q-8	H	COOC ₂ H ₅	H	H	4-NO ₂	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	H	COOC ₂ H ₅	H	H	4-NO ₂	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	H	4-NO ₂	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-F	4-Cl
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-F	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-F	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-F	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-Cl	4-Cl
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-Cl	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-Cl	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-Cl	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CN	4-Cl
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CN	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CN	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CN	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CF ₃	4-Cl
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-NO ₂	4-Cl
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	H	COOC ₂ H ₅	H	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	H	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	H	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	H	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	H	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	H	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	H	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	H	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	H	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	H	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	H	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	H	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	H	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	H	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	H	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	H	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	H	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	H	4-NO ₂	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	CH ₃	H	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Cl	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	4-Cl	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Cl	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	4-Cl	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Cl	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	4-Cl	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Cl	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	4-Cl	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Cl	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	4-Cl	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Cl	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Br	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	4-Br	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Br	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	4-Br	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Br	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	4-Br	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Br	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	4-Br	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-Br	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	4-Br	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-Br	4-NO ₂	4-SF ₅

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CH ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	4-CF ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Cl	4-F	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	CH ₃	5-Cl	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Cl	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	5-Cl	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Cl	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	5-Cl	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Cl	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	5-Cl	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Cl	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	5-Cl	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Cl	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Br	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	5-Br	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Br	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	5-Br	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Br	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	5-Br	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Br	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	5-Br	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-Br	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	5-Br	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-Br	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-F	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CH ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-F	4-Cl
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-F	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-F	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-Cl	4-Cl
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CN	4-Cl
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	CH ₃	5-CF ₃	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	H	4-F	4-Cl
Q-8	CH ₃	H	COOCH ₃	H	4-F	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-F	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-8	CH ₃	H	COOCH ₃	H	4-F	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	H	4-Cl	4-Cl
Q-8	CH ₃	H	COOCH ₃	H	4-Cl	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-Cl	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-Cl	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	H	4-CN	4-Cl
Q-8	CH ₃	H	COOCH ₃	H	4-CN	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-CN	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-CN	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	H	4-CF ₃	4-Cl
Q-8	CH ₃	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	H	4-NO ₂	4-Cl
Q-8	CH ₃	H	COOCH ₃	H	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	H	4-NO ₂	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-F	4-Cl
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-F	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-F	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-F	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-Cl	4-Cl
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-Cl	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-Cl	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-Cl	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CN	4-Cl
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CN	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CN	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CN	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CF ₃	4-Cl
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CF ₃	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CF ₃	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-CF ₃	4-SF ₅
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-NO ₂	4-Cl
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-NO ₂	4-CF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-NO ₂	4-OCF ₃
Q-8	CH ₃	H	COOCH ₃	4-CF ₃	4-NO ₂	4-SF ₅
Q-9	H	H	H	H	4-F	4-Cl
Q-9	H	H	H	H	4-F	4-CF ₃
Q-9	H	H	H	H	4-F	4-OCF ₃
Q-9	H	H	H	H	4-F	4-SF ₅

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-9	H	H	H	H	4-Cl	4-Cl
Q-9	H	H	H	H	4-Cl	4-CF ₃
Q-9	H	H	H	H	4-Cl	4-OCF ₃
Q-9	H	H	H	H	4-Cl	4-SF ₅
Q-9	H	H	H	H	4-CN	4-Cl
Q-9	H	H	H	H	4-CN	4-CF ₃
Q-9	H	H	H	H	4-CN	4-OCF ₃
Q-9	H	H	H	H	4-CN	4-SF ₅
Q-9	H	H	H	H	4-CF ₃	4-Cl
Q-9	H	H	H	H	4-CF ₃	4-CF ₃
Q-9	H	H	H	H	4-CF ₃	4-OCF ₃
Q-9	H	H	H	H	4-CF ₃	4-SF ₅
Q-9	H	H	H	H	4-NO ₂	4-Cl
Q-9	H	H	H	H	4-NO ₂	4-CF ₃
Q-9	H	H	H	H	4-NO ₂	4-OCF ₃
Q-9	H	H	H	H	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-Cl	4-F	4-Cl
Q-9	H	H	H	2-Cl	4-F	4-CF ₃
Q-9	H	H	H	2-Cl	4-F	4-OCF ₃
Q-9	H	H	H	2-Cl	4-F	4-SF ₅
Q-9	H	H	H	2-Cl	4-Cl	4-Cl
Q-9	H	H	H	2-Cl	4-Cl	4-CF ₃
Q-9	H	H	H	2-Cl	4-Cl	4-OCF ₃
Q-9	H	H	H	2-Cl	4-Cl	4-SF ₅
Q-9	H	H	H	2-Cl	4-CN	4-Cl
Q-9	H	H	H	2-Cl	4-CN	4-CF ₃
Q-9	H	H	H	2-Cl	4-CN	4-OCF ₃
Q-9	H	H	H	2-Cl	4-CN	4-SF ₅
Q-9	H	H	H	2-Cl	4-CF ₃	4-Cl
Q-9	H	H	H	2-Cl	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-Cl	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-Cl	4-CF ₃	4-SF ₅
Q-9	H	H	H	2-Cl	4-NO ₂	4-Cl
Q-9	H	H	H	2-Cl	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-Cl	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-Cl	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-CH ₃	4-F	4-Cl
Q-9	H	H	H	2-CH ₃	4-F	4-CF ₃
Q-9	H	H	H	2-CH ₃	4-F	4-OCF ₃
Q-9	H	H	H	2-CH ₃	4-F	4-SF ₅
Q-9	H	H	H	2-CH ₃	4-Cl	4-Cl

Q	R ¹	R ²	R ³	X _K	Y _m	Z _n
Q-9	H	H	H	2-CH ₃	4-Cl	4-CF ₃
Q-9	H	H	H	2-CH ₃	4-Cl	4-OCF ₃
Q-9	H	H	H	2-CH ₃	4-Cl	4-SF ₅
Q-9	H	H	H	2-CH ₃	4-CN	4-Cl
Q-9	H	H	H	2-CH ₃	4-CN	4-CF ₃
Q-9	H	H	H	2-CH ₃	4-CN	4-OCF ₃
Q-9	H	H	H	2-CH ₃	4-CN	4-SF ₅
Q-9	H	H	H	2-CH ₃	4-CF ₃	4-Cl
Q-9	H	H	H	2-CH ₃	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-CH ₃	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-CH ₃	4-CF ₃	4-SF ₅
Q-9	H	H	H	2-CH ₃	4-NO ₂	4-Cl
Q-9	H	H	H	2-CH ₃	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-CH ₃	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-CH ₃	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-F	4-Cl
Q-9	H	H	H	2-CF ₃	4-F	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-F	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-F	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-Cl	4-Cl
Q-9	H	H	H	2-CF ₃	4-Cl	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-Cl	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-Cl	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-CN	4-Cl
Q-9	H	H	H	2-CF ₃	4-CN	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-Cl	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-Cl	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-Cl	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-CN	4-Cl
Q-9	H	H	H	2-CF ₃	4-CN	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-CN	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-CN	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-CF ₃	4-Cl
Q-9	H	H	H	2-CF ₃	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-CF ₃	4-SF ₅
Q-9	H	H	H	2-CF ₃	4-NO ₂	4-Cl
Q-9	H	H	H	2-CF ₃	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-CF ₃	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-CF ₃	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-CF ₂ Cl	4-F	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-9	H	H	H	2-CF ₂ Cl	4-F	4-CF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-F	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-F	4-SF ₅
Q-9	H	H	H	2-CF ₂ Cl	4-Cl	4-Cl
Q-9	H	H	H	2-CF ₂ Cl	4-Cl	4-CF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-Cl	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-Cl	4-SF ₅
Q-9	H	H	H	2-CF ₂ Cl	4-CN	4-Cl
Q-9	H	H	H	2-CF ₂ Cl	4-CN	4-CF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-CN	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-CN	4-SF ₅
Q-9	H	H	H	2-CF ₂ Cl	4-CF ₃	4-Cl
Q-9	H	H	H	2-CF ₂ Cl	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-CF ₃	4-SF ₅
Q-9	H	H	H	2-CF ₂ Cl	4-NO ₂	4-Cl
Q-9	H	H	H	2-CF ₂ Cl	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Cl	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-CF ₂ Br	4-F	4-Cl
Q-9	H	H	H	2-CF ₂ Br	4-F	4-CF ₃
Q-9	H	H	H	2-CF ₂ Br	4-F	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Br	4-F	4-SF ₅
Q-9	H	H	H	2-CF ₂ Br	4-Cl	4-Cl
Q-9	H	H	H	2-CF ₂ Br	4-Cl	4-CF ₃
Q-9	H	H	H	2-CF ₂ Br	4-Cl	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Br	4-Cl	4-SF ₅
Q-9	H	H	H	2-CF ₂ Br	4-CN	4-Cl
Q-9	H	H	H	2-CF ₂ Br	4-CN	4-CF ₃
Q-9	H	H	H	2-CF ₂ Br	4-CN	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Br	4-CN	4-SF ₅
Q-9	H	H	H	2-CF ₂ Br	4-CF ₃	4-Cl
Q-9	H	H	H	2-CF ₂ Br	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-CF ₂ Br	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Br	4-CF ₃	4-SF ₅
Q-9	H	H	H	2-CF ₂ Br	4-NO ₂	4-Cl
Q-9	H	H	H	2-CF ₂ Br	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-CF ₂ Br	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-CF ₂ Br	4-NO ₂	4-SF ₅
Q-9	H	H	H	2-Br	4-CN	4-Cl
Q-9	H	H	H	2-Br	4-CN	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-9	H	H	H	2-Br	4-CF ₃	4-Cl
Q-9	H	H	H	2-Br	4-CF ₃	4-OCF ₃
Q-9	H	H	H	2-Br	4-NO ₂	4-Cl
Q-9	H	H	H	2-Br	4-NO ₂	4-CF ₃
Q-9	H	H	H	2-CN	4-CN	4-Cl
Q-9	H	H	H	2-CN	4-CN	4-CF ₃
Q-9	H	H	H	2-CN	4-CF ₃	4-Cl
Q-9	H	H	H	2-CN	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-CN	4-NO ₂	4-Cl
Q-9	H	H	H	2-CN	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-NHCOCH ₃	4-CN	4-Cl
Q-9	H	H	H	2-NHCOCH ₃	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-NHCOCF ₃	4-CN	4-OCF ₃
Q-9	H	H	H	2-NHCOCF ₃	4-NO ₂	4-OCF ₃
Q-9	H	H	H	2-NHSO ₂ CH ₃	4-CN	4-Cl
Q-9	H	H	H	2-NHSO ₂ CH ₃	4-CF ₃	4-CF ₃
Q-9	H	H	H	2-NHSO ₂ CF ₃	4-CN	4-Cl
Q-9	H	H	H	2-NHSO ₂ CF ₃	4-NO ₂	4-CF ₃
Q-9	CH ₃	H	H	H	4-CN	4-Cl
Q-9	CH ₃	H	H	2-Cl	4-CF ₃	4-Cl
Q-9	CH ₃	H	H	2-CH ₃	4-NO ₂	4-CF ₃
Q-9	CH ₃	H	H	2-CF ₃	4-CN	4-OCF ₃
Q-9	CH ₃	H	H	2-CF ₃	4-CF ₃	4-Cl
Q-9	H	H	CH ₃	H	4-NO ₂	4-Cl
Q-9	H	H	CH ₃	2-Cl	4-CN	4-CF ₃
Q-9	H	H	CH ₃	2-CH ₃	4-CF ₃	4-OCF ₃
Q-9	H	H	CH ₃	2-CF ₃	4-NO ₂	4-Cl
Q-9	H	H	CH ₃	2-CF ₃	4-CN	4-Cl
Q-9	H	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-9	H	H	COOCH ₃	2-Cl	4-NO ₂	4-OCF ₃
Q-9	H	H	COOCH ₃	2-CH ₃	4-CN	4-Cl
Q-9	H	H	COOCH ₃	2-CF ₃	4-CF ₃	4-Cl
Q-9	H	H	COOCH ₃	2-CF ₃	4-NO ₂	4-CF ₃
Q-9	CH ₃	H	CH ₃	H	4-CN	4-OCF ₃
Q-9	CH ₃	H	CH ₃	2-Cl	4-CF ₃	4-Cl
Q-9	CH ₃	H	CH ₃	2-CH ₃	4-NO ₂	4-Cl
Q-9	CH ₃	H	CH ₃	2-CF ₃	4-CN	4-CF ₃
Q-9	CH ₃	H	CH ₃	2-CF ₃	4-CF ₃	4-OCF ₃
Q-9	CH ₃	H	COOCH ₃	H	4-NO ₂	4-Cl
Q-9	CH ₃	H	COOCH ₃	2-Cl	4-CN	4-Cl
Q-9	CH ₃	H	COOCH ₃	2-CH ₃	4-CF ₃	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-9	CH ₃	H	COOCH ₃	2-CF ₃	4-NO ₂	4-OCF ₃
Q-9	CH ₃	H	COOCH ₃	2-CF ₃	4-CN	4-Cl
Q-10	H	H	H	H	4-F	4-Cl
Q-10	H	H	H	H	4-F	4-CF ₃
Q-10	H	H	H	H	4-F	4-OCF ₃
Q-10	H	H	H	H	4-F	4-SF ₅
Q-10	H	H	H	H	4-Cl	4-Cl
Q-10	H	H	H	H	4-Cl	4-CF ₃
Q-10	H	H	H	H	4-Cl	4-OCF ₃
Q-10	H	H	H	H	4-Cl	4-SF ₅
Q-10	H	H	H	H	4-CN	4-Cl
Q-10	H	H	H	H	4-CN	4-CF ₃
Q-10	H	H	H	H	4-CN	4-OCF ₃
Q-10	H	H	H	H	4-CN	4-SF ₅
Q-10	H	H	H	H	4-CF ₃	4-Cl
Q-10	H	H	H	H	4-CF ₃	4-CF ₃
Q-10	H	H	H	H	4-CF ₃	4-OCF ₃
Q-10	H	H	H	H	4-CF ₃	4-SF ₅
Q-10	H	H	H	H	4-NO ₂	4-Cl
Q-10	H	H	H	H	4-NO ₂	4-CF ₃
Q-10	H	H	H	H	4-NO ₂	4-OCF ₃
Q-10	H	H	H	H	4-NO ₂	4-SF ₅
Q-10	H	H	H	2-Cl	4-F	4-Cl
Q-10	H	H	H	2-Cl	4-F	4-CF ₃
Q-10	H	H	H	2-Cl	4-F	4-OCF ₃
Q-10	H	H	H	2-Cl	4-F	4-SF ₅
Q-10	H	H	H	2-Cl	4-Cl	4-Cl
Q-10	H	H	H	2-Cl	4-Cl	4-CF ₃
Q-10	H	H	H	2-Cl	4-Cl	4-OCF ₃
Q-10	H	H	H	2-Cl	4-Cl	4-SF ₅
Q-10	H	H	H	2-Cl	4-CN	4-Cl
Q-10	H	H	H	2-Cl	4-CN	4-CF ₃
Q-10	H	H	H	2-Cl	4-CN	4-OCF ₃
Q-10	H	H	H	2-Cl	4-CN	4-SF ₅
Q-10	H	H	H	2-Cl	4-CF ₃	4-Cl
Q-10	H	H	H	2-Cl	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-Cl	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-Cl	4-CF ₃	4-SF ₅
Q-10	H	H	H	2-Cl	4-NO ₂	4-Cl
Q-10	H	H	H	2-Cl	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-Cl	4-NO ₂	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-10	H	H	H	2-Cl	4-NO ₂	4-SF ₅
Q-10	H	H	H	2-CH ₃	4-F	4-Cl
Q-10	H	H	H	2-CH ₃	4-F	4-CF ₃
Q-10	H	H	H	2-CH ₃	4-F	4-OCF ₃
Q-10	H	H	H	2-CH ₃	4-F	4-SF ₅
Q-10	H	H	H	2-CH ₃	4-Cl	4-Cl
Q-10	H	H	H	2-CH ₃	4-Cl	4-CF ₃
Q-10	H	H	H	2-CH ₃	4-Cl	4-OCF ₃
Q-10	H	H	H	2-CH ₃	4-Cl	4-SF ₅
Q-10	H	H	H	2-CH ₃	4-CN	4-Cl
Q-10	H	H	H	2-CH ₃	4-CN	4-CF ₃
Q-10	H	H	H	2-CH ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-CH ₃	4-CN	4-SF ₅
Q-10	H	H	H	2-CH ₃	4-CF ₃	4-Cl
Q-10	H	H	H	2-CH ₃	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-CH ₃	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-CH ₃	4-CF ₃	4-SF ₅
Q-10	H	H	H	2-CH ₃	4-NO ₂	4-Cl
Q-10	H	H	H	2-CH ₃	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-CH ₃	4-NO ₂	4-OCF ₃
Q-10	H	H	H	2-CH ₃	4-NO ₂	4-SF ₅
Q-10	H	H	H	2-CF ₃	4-F	4-Cl
Q-10	H	H	H	2-CF ₃	4-F	4-CF ₃
Q-10	H	H	H	2-CF ₃	4-F	4-OCF ₃
Q-10	H	H	H	2-CF ₃	4-F	4-SF ₅
Q-10	H	H	H	2-CF ₃	4-Cl	4-Cl
Q-10	H	H	H	2-CF ₃	4-Cl	4-CF ₃
Q-10	H	H	H	2-CF ₃	4-Cl	4-OCF ₃
Q-10	H	H	H	2-CF ₃	4-Cl	4-SF ₅
Q-10	H	H	H	2-CF ₃	4-CN	4-Cl
Q-10	H	H	H	2-CF ₃	4-CN	4-CF ₃
Q-10	H	H	H	2-CF ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-CF ₃	4-CN	4-SF ₅
Q-10	H	H	H	2-CF ₃	4-CF ₃	4-Cl
Q-10	H	H	H	2-CF ₃	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-CF ₃	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-CF ₃	4-CF ₃	4-SF ₅
Q-10	H	H	H	2-CF ₃	4-NO ₂	4-Cl
Q-10	H	H	H	2-CF ₃	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-CF ₃	4-NO ₂	4-OCF ₃
Q-10	H	H	H	2-CF ₃	4-NO ₂	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-10	H	H	H	2-CF ₂ Cl	4-F	4-Cl
Q-10	H	H	H	2-CF ₂ Cl	4-F	4-CF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-F	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-F	4-SF ₅
Q-10	H	H	H	2-CF ₂ Cl	4-Cl	4-Cl
Q-10	H	H	H	2-CF ₂ Cl	4-Cl	4-CF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-Cl	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-Cl	4-SF ₅
Q-10	H	H	H	2-CF ₂ Cl	4-CN	4-Cl
Q-10	H	H	H	2-CF ₂ Cl	4-CN	4-CF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-CN	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-CN	4-SF ₅
Q-10	H	H	H	2-CF ₂ Cl	4-CF ₃	4-Cl
Q-10	H	H	H	2-CF ₂ Cl	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-CF ₃	4-SF ₅
Q-10	H	H	H	2-CF ₂ Cl	4-NO ₂	4-Cl
Q-10	H	H	H	2-CF ₂ Cl	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-NO ₂	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Cl	4-NO ₂	4-SF ₅
Q-10	H	H	H	2-CF ₂ Br	4-F	4-Cl
Q-10	H	H	H	2-CF ₂ Br	4-F	4-CF ₃
Q-10	H	H	H	2-CF ₂ Br	4-F	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Br	4-F	4-SF ₅
Q-10	H	H	H	2-CF ₂ Br	4-Cl	4-Cl
Q-10	H	H	H	2-CF ₂ Br	4-Cl	4-CF ₃
Q-10	H	H	H	2-CF ₂ Br	4-Cl	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Br	4-Cl	4-SF ₅
Q-10	H	H	H	2-CF ₂ Br	4-CN	4-Cl
Q-10	H	H	H	2-CF ₂ Br	4-CN	4-CF ₃
Q-10	H	H	H	2-CF ₂ Br	4-CN	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Br	4-CN	4-SF ₅
Q-10	H	H	H	2-CF ₂ Br	4-CF ₃	4-Cl
Q-10	H	H	H	2-CF ₂ Br	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-CF ₂ Br	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Br	4-CF ₃	4-SF ₅
Q-10	H	H	H	2-CF ₂ Br	4-NO ₂	4-Cl
Q-10	H	H	H	2-CF ₂ Br	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-CF ₂ Br	4-NO ₂	4-OCF ₃
Q-10	H	H	H	2-CF ₂ Br	4-NO ₂	4-SF ₅
Q-10	H	H	H	2-Br	4-CN	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-10	H	H	H	2-Br	4-CN	4-CF ₃
Q-10	H	H	H	2-Br	4-CF ₃	4-Cl
Q-10	H	H	H	2-Br	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-Br	4-NO ₂	4-Cl
Q-10	H	H	H	2-Br	4-NO ₂	4-CF ₃
Q-10	H	H	H	2-CN	4-CN	4-Cl
Q-10	H	H	H	2-CN	4-CN	4-CF ₃
Q-10	H	H	H	2-CN	4-CF ₃	4-Cl
Q-10	H	H	H	2-CN	4-CF ₃	4-OCF ₃
Q-10	H	H	H	2-CN	4-NO ₂	4-Cl
Q-10	H	H	H	2-CN	4-NO ₂	4-CF ₃
Q-10	H	H	H	4-CH ₃	4-CN	4-OCF ₃
Q-10	H	H	H	4-CF ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-CH ₃ , 4-CF ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-CF ₃ , 4-CH ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-NHCOCH ₃	4-CN	4-Cl
Q-10	H	H	H	2-NHCOCH ₃	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-NHCOCF ₃	4-CN	4-OCF ₃
Q-10	H	H	H	2-NHCOCF ₃	4-NO ₂	4-OCF ₃
Q-10	H	H	H	2-NHSO ₂ CH ₃	4-CN	4-Cl
Q-10	H	H	H	2-NHSO ₂ CH ₃	4-CF ₃	4-CF ₃
Q-10	H	H	H	2-NHSO ₂ CF ₃	4-CN	4-Cl
Q-10	H	H	H	2-NHSO ₂ CF ₃	4-NO ₂	4-CF ₃
Q-10	CH ₃	H	H	H	4-CN	4-Cl
Q-10	CH ₃	H	H	2-Cl	4-CF ₃	4-Cl
Q-10	CH ₃	H	H	2-CH ₃	4-NO ₂	4-CF ₃
Q-10	CH ₃	H	H	2-CF ₃	4-CN	4-OCF ₃
Q-10	CH ₃	H	H	2-CF ₃	4-CF ₃	4-Cl
Q-10	H	H	CH ₃	H	4-NO ₂	4-Cl
Q-10	H	H	CH ₃	2-Cl	4-CN	4-CF ₃
Q-10	H	H	CH ₃	2-CH ₃	4-CF ₃	4-OCF ₃
Q-10	H	H	CH ₃	2-CF ₃	4-NO ₂	4-Cl
Q-10	H	H	CH ₃	2-CF ₃	4-CN	4-Cl
Q-10	H	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-10	H	H	COOCH ₃	2-Cl	4-NO ₂	4-OCF ₃
Q-10	H	H	COOCH ₃	2-CH ₃	4-CN	4-Cl
Q-10	H	H	COOCH ₃	2-CF ₃	4-CF ₃	4-Cl
Q-10	H	H	COOCH ₃	2-CF ₃	4-NO ₂	4-CF ₃
Q-10	CH ₃	H	CH ₃	H	4-CN	4-OCF ₃
Q-10	CH ₃	H	CH ₃	2-Cl	4-CF ₃	4-Cl
Q-10	CH ₃	H	CH ₃	2-CH ₃	4-NO ₂	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-10	CH ₃	H	CH ₃	2-CF ₃	4-CN	4-CF ₃
Q-10	CH ₃	H	CH ₃	2-CF ₃	4-CF ₃	4-OCF ₃
Q-10	CH ₃	H	COOCH ₃	H	4-NO ₂	4-Cl
Q-10	CH ₃	H	COOCH ₃	2-Cl	4-CN	4-Cl
Q-10	CH ₃	H	COOCH ₃	2-CH ₃	4-CF ₃	4-CF ₃
Q-10	CH ₃	H	COOCH ₃	2-CF ₃	4-NO ₂	4-OCF ₃
Q-10	CH ₃	H	COOCH ₃	2-CF ₃	4-CN	4-Cl
Q-11	H	H	H	H	4-CF ₃	4-Cl
Q-11	CH ₃	H	H	4-CH ₃	4-NO ₂	4-CF ₃
Q-11	H	H	CH ₃	4-CH ₃	4-CN	4-OCF ₃
Q-11	H	H	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-11	H	H	H	5-CH ₃	4-NO ₂	4-Cl
Q-11	CH ₃	H	CH ₃	5-CF ₃	4-CN	4-CF ₃
Q-12	H	H	H	H	4-CN	4-Cl
Q-12	H	H	H	2-CH ₃	4-CF ₃	4-Cl
Q-12	CH ₃	H	H	2-CH ₃	4-NO ₂	4-CF ₃
Q-12	H	H	H	2-CF ₃	4-CN	4-OCF ₃
Q-12	H	H	CH ₃	2-CF ₃	4-CF ₃	4-Cl
Q-13	H	H	H	H	4-NO ₂	4-Cl
Q-13	H	H	H	2-CH ₃	4-CN	4-CF ₃
Q-13	CH ₃	H	H	2-CH ₃	4-CF ₃	4-OCF ₃
Q-13	H	H	H	2-CF ₃	4-NO ₂	4-Cl
Q-13	H	H	CH ₃	2-CF ₃	4-CN	4-Cl
Q-14	H	H	H	H	4-CF ₃	4-CF ₃
Q-14	H	H	H	3-CH ₃	4-NO ₂	4-OCF ₃
Q-14	H	H	H	3-CF ₃	4-CN	4-Cl
Q-14	H	H	H	3-NO ₂	4-CF ₃	4-Cl
Q-14	H	H	H	4-Cl	4-NO ₂	4-CF ₃
Q-14	H	H	H	4-Br	4-CN	4-OCF ₃
Q-14	H	H	H	4-I	4-CF ₃	4-Cl
Q-14	H	H	H	4-CH ₃	4-NO ₂	4-Cl
Q-14	H	H	H	4-NO ₂	4-CN	4-CF ₃
Q-14	H	H	H	3-CH ₃ , 4-Br	4-CF ₃	4-OCF ₃
Q-14	H	H	H	3-CF ₃ , 5-CH ₃	4-NO ₂	4-Cl
Q-14	CH ₃	H	H	H	4-CN	4-Cl
Q-14	H	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-14	H	H	COOCH ₃	H	4-NO ₂	4-OCF ₃
Q-14	CH ₃	H	CH ₃	H	4-CN	4-Cl

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Q	R ¹	R ²	R ³	R ⁴	Xk	Ym	Zn
Q-15	H	H	H	H	H	4-CN	4-Cl
Q-15	H	H	H	CH ₃	H	4-CF ₃	4-Cl
Q-15	H	H	H	CH ₂ F	H	4-NO ₂	4-CF ₃
Q-15	H	H	H	CHF ₂	H	4-CN	4-OCF ₃
Q-15	H	H	H	CF ₃	H	4-CF ₃	4-Cl
Q-15	H	H	H	CF ₂ Br	H	4-NO ₂	4-Cl
Q-15	H	H	H	CH ₃	5-CF ₃	4-CN	4-CF ₃
Q-15	CH ₃	H	H	CH ₃	H	4-CF ₃	4-OCF ₃
Q-15	H	H	CH ₃	CH ₃	H	4-NO ₂	4-Cl
Q-15	H	H	COOCH ₃	CH ₃	H	4-CN	4-Cl
Q-16	H	H	H	H	H	4-CF ₃	4-CF ₃
Q-16	H	H	H	CH ₃	H	4-NO ₂	4-OCF ₃
Q-16	H	H	H	CH ₂ F	H	4-CN	4-Cl
Q-16	H	H	H	CHF ₂	H	4-CF ₃	4-Cl
Q-16	H	H	H	CF ₃	H	4-NO ₂	4-CF ₃
Q-16	H	H	H	CF ₂ Br	H	4-CN	4-OCF ₃
Q-16	CH ₃	H	H	CH ₃	H	4-CF ₃	4-Cl
Q-16	H	H	CH ₃	CH ₃	H	4-NO ₂	4-Cl
Q-16	H	H	COOCH ₃	CH ₃	H	4-CN	4-CF ₃
Q-17	H	H	H	H	H	4-CF ₃	4-OCF ₃
Q-17	H	H	H	CH ₂ OC ₂ H ₅	H	4-NO ₂	4-Cl
Q-17	H	H	H	CH ₃	3-Cl	4-CN	4-Cl
Q-17	CH ₃	H	H	CH ₃	H	4-CF ₃	4-CF ₃
Q-17	H	H	CH ₃	CH ₂ OC ₂ H ₅	H	4-NO ₂	4-OCF ₃
Q-17	H	H	COOCH ₃	CH ₃	3-CH ₃	4-CN	4-Cl
Q-19	H	H	H	H	H	4-NO ₂	4-OCF ₃
Q-19	H	H	H	CH ₃	H	4-CN	4-Cl
Q-19	H	H	H	CH ₂ OC ₂ H ₅	H	4-CF ₃	4-Cl
Q-20	H	H	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-20	CH ₃	H	H	CH ₃	H	4-CN	4-OCF ₃
Q-20	H	H	CH ₃	CH ₃	H	4-CF ₃	4-Cl
Q-20	H	H	COOCH ₃	CH ₃	H	4-NO ₂	4-Cl
Q-21	H	H	H	CH ₃	H	4-CN	4-CF ₃
Q-23	H	H	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-24	H	H	H	CH ₃	H	4-CN	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-18	H	H	H	H	4-CN	4-Cl
Q-18	H	H	H	4-Br	4-CF ₃	4-Cl
Q-18	H	H	H	4-CH ₃	4-NO ₂	4-CF ₃
Q-18	H	H	H	4-NO ₂	4-CN	4-OCF ₃
Q-18	H	H	H	5-Br	4-CF ₃	4-Cl
Q-18	H	H	H	5-CH ₃	4-NO ₂	4-Cl
Q-18	H	H	H	5-NO ₂	4-CN	4-CF ₃
Q-18	H	H	H	4,5-Cl ₂	4-CF ₃	4-OCF ₃
Q-18	CH ₃	H	H	H	4-NO ₂	4-Cl
Q-18	H	H	CH ₃	H	4-CN	4-Cl
Q-18	H	H	COOCH ₃	H	4-CF ₃	4-CF ₃
Q-22	H	H	H	H	4-CF ₃	4-OCF ₃
Q-22	H	H	H	H	4-COOC ₂ H ₅	4-OCF ₃
Q-22	H	H	H	3-Cl	4-CN	4-Cl
Q-22	H	H	H	3-NO ₂	4-CF ₃	4-CF ₃
Q-22	CH ₃	H	H	H	4-NO ₂	4-OCF ₃
Q-22	H	H	CH ₃	H	4-CN	4-Cl
Q-22	H	H	COOCH ₃	H	4-CN	4-Cl
Q-22	CH ₃	H	CH ₃	H	4-CF ₃	4-Cl
Q-25	H	H	H	H	4-CF ₃	4-Cl
Q-25	H	H	H	5-CH ₃	4-NO ₂	4-Cl
Q-26	H	H	H	H	4-CN	4-CF ₃
Q-26	H	H	H	3-CH ₃	4-CF ₃	4-OCF ₃
Q-27	H	H	H	H	4-NO ₂	4-Cl
Q-27	H	H	H	3-CH ₃	4-CN	4-Cl
Q-28	H	H	H	H	4-CF ₃	4-CF ₃
Q-28	H	H	H	5-Cl	4-NO ₂	4-OCF ₃
Q-28	H	H	H	5-Br	4-CN	4-Cl
Q-28	H	H	H	4,5-Cl ₂	4-CF ₃	4-Cl
Q-29	H	H	H	H	4-NO ₂	4-CF ₃
Q-30	H	H	H	3-CH ₃	4-CN	4-OCF ₃
Q-30	H	H	H	3-CF ₃	4-CF ₃	4-Cl
Q-31	H	H	H	H	4-F	4-Cl
Q-31	H	H	H	H	4-F	4-CF ₃
Q-31	H	H	H	H	4-F	4-OCF ₃
Q-31	H	H	H	H	4-F	4-SF ₅
Q-31	H	H	H	H	4-Cl	4-Cl
Q-31	H	H	H	H	4-Cl	4-CF ₃
Q-31	H	H	H	H	4-Cl	4-OCF ₃
Q-31	H	H	H	H	4-Cl	4-SF ₅
Q-31	H	H	H	H	4-CN	4-Cl

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	H	4-CN	4-CF ₃
Q-31	H	H	H	H	4-CN	4-OCF ₃
Q-31	H	H	H	H	4-CN	4-SF ₅
Q-31	H	H	H	H	4-CF ₃	4-Cl
Q-31	H	H	H	H	4-CF ₃	4-CF ₃
Q-31	H	H	H	H	4-CF ₃	4-OCF ₃
Q-31	H	H	H	H	4-CF ₃	4-SF ₅
Q-31	H	H	H	H	4-NO ₂	4-Cl
Q-31	H	H	H	H	4-NO ₂	4-CF ₃
Q-31	H	H	H	H	4-NO ₂	4-OCF ₃
Q-31	H	H	H	H	4-NO ₂	4-SF ₅
Q-31	H	H	H	4-Cl	4-F	4-Cl
Q-31	H	H	H	4-Cl	4-F	4-CF ₃
Q-31	H	H	H	4-Cl	4-F	4-OCF ₃
Q-31	H	H	H	4-Cl	4-F	4-SF ₅
Q-31	H	H	H	4-Cl	4-Cl	4-Cl
Q-31	H	H	H	4-Cl	4-Cl	4-CF ₃
Q-31	H	H	H	4-Cl	4-Cl	4-OCF ₃
Q-31	H	H	H	4-Cl	4-Cl	4-SF ₅
Q-31	H	H	H	4-Cl	4-CN	4-Cl
Q-31	H	H	H	4-Cl	4-CN	4-CF ₃
Q-31	H	H	H	4-Cl	4-CN	4-OCF ₃
Q-31	H	H	H	4-Cl	4-CN	4-SF ₅
Q-31	H	H	H	4-Cl	4-CF ₃	4-Cl
Q-31	H	H	H	4-Cl	4-CF ₃	4-CF ₃
Q-31	H	H	H	4-Cl	4-CF ₃	4-OCF ₃
Q-31	H	H	H	4-Cl	4-CF ₃	4-SF ₅
Q-31	H	H	H	4-Cl	4-NO ₂	4-Cl
Q-31	H	H	H	4-Cl	4-NO ₂	4-CF ₃
Q-31	H	H	H	4-Cl	4-NO ₂	4-OCF ₃
Q-31	H	H	H	4-Cl	4-NO ₂	4-SF ₅
Q-31	H	H	H	4-CH ₃	4-F	4-Cl
Q-31	H	H	H	4-CH ₃	4-F	4-CF ₃
Q-31	H	H	H	4-CH ₃	4-F	4-OCF ₃
Q-31	H	H	H	4-CH ₃	4-F	4-SF ₅
Q-31	H	H	H	4-CH ₃	4-Cl	4-Cl
Q-31	H	H	H	4-CH ₃	4-Cl	4-CF ₃
Q-31	H	H	H	4-CH ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	4-CH ₃	4-Cl	4-SF ₅
Q-31	H	H	H	4-CH ₃	4-CN	4-Cl
Q-31	H	H	H	4-CH ₃	4-CN	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	4-CH ₃	4-CN	4-OCF ₃
Q-31	H	H	H	4-CH ₃	4-CN	4-SF ₅
Q-31	H	H	H	4-CH ₃	4-CF ₃	4-Cl
Q-31	H	H	H	4-CH ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	4-CH ₃	4-CF ₃	4-OCF ₃
Q-31	H	H	H	4-CH ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	4-CH ₃	4-NO ₂	4-Cl
Q-31	H	H	H	4-CH ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	4-CH ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	4-CH ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	4-CF ₃	4-F	4-Cl
Q-31	H	H	H	4-CF ₃	4-F	4-CF ₃
Q-31	H	H	H	4-CF ₃	4-F	4-OCF ₃
Q-31	H	H	H	4-CF ₃	4-F	4-SF ₅
Q-31	H	H	H	4-CF ₃	4-Cl	4-Cl
Q-31	H	H	H	4-CF ₃	4-Cl	4-CF ₃
Q-31	H	H	H	4-CF ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	4-CF ₃	4-Cl	4-SF ₅
Q-31	H	H	H	4-CF ₃	4-CN	4-Cl
Q-31	H	H	H	4-CF ₃	4-CN	4-CF ₃
Q-31	H	H	H	4-CF ₃	4-CN	4-OCF ₃
Q-31	H	H	H	4-CF ₃	4-CN	4-SF ₅
Q-31	H	H	H	4-CF ₃	4-CF ₃	4-Cl
Q-31	H	H	H	4-CF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-31	H	H	H	4-CF ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	4-CF ₃	4-NO ₂	4-Cl
Q-31	H	H	H	4-CF ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	4-CF ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	4-CF ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	4-NO ₂	4-F	4-Cl
Q-31	H	H	H	4-NO ₂	4-F	4-CF ₃
Q-31	H	H	H	4-NO ₂	4-F	4-OCF ₃
Q-31	H	H	H	4-NO ₂	4-F	4-SF ₅
Q-31	H	H	H	4-NO ₂	4-Cl	4-Cl
Q-31	H	H	H	4-NO ₂	4-Cl	4-CF ₃
Q-31	H	H	H	4-NO ₂	4-Cl	4-OCF ₃
Q-31	H	H	H	4-NO ₂	4-Cl	4-SF ₅
Q-31	H	H	H	4-NO ₂	4-CN	4-Cl
Q-31	H	H	H	4-NO ₂	4-CN	4-CF ₃
Q-31	H	H	H	4-NO ₂	4-CN	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	4-NO ₂	4-CN	4-SF ₅
Q-31	H	H	H	4-NO ₂	4-CF ₃	4-Cl
Q-31	H	H	H	4-NO ₂	4-CF ₃	4-CF ₃
Q-31	H	H	H	4-NO ₂	4-CF ₃	4-OCF ₃
Q-31	H	H	H	4-NO ₂	4-CF ₃	4-SF ₅
Q-31	H	H	H	4-NO ₂	4-NO ₂	4-Cl
Q-31	H	H	H	4-NO ₂	4-NO ₂	4-CF ₃
Q-31	H	H	H	4-NO ₂	4-NO ₂	4-OCF ₃
Q-31	H	H	H	4-NO ₂	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-F	4-F	4-Cl
Q-31	H	H	H	6-F	4-F	4-CF ₃
Q-31	H	H	H	6-F	4-F	4-OCF ₃
Q-31	H	H	H	6-F	4-F	4-SF ₅
Q-31	H	H	H	6-F	4-Cl	4-Cl
Q-31	H	H	H	6-F	4-Cl	4-CF ₃
Q-31	H	H	H	6-F	4-Cl	4-OCF ₃
Q-31	H	H	H	6-F	4-Cl	4-SF ₅
Q-31	H	H	H	6-F	4-CN	4-Cl
Q-31	H	H	H	6-F	4-CN	4-CF ₃
Q-31	H	H	H	6-F	4-CN	4-OCF ₃
Q-31	H	H	H	6-F	4-CN	4-SF ₅
Q-31	H	H	H	6-F	4-CF ₃	4-Cl
Q-31	H	H	H	6-F	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-F	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-F	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-F	4-NO ₂	4-Cl
Q-31	H	H	H	6-F	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-F	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-F	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-Cl	4-F	4-Cl
Q-31	H	H	H	6-Cl	4-F	4-CF ₃
Q-31	H	H	H	6-Cl	4-F	4-OCF ₃
Q-31	H	H	H	6-Cl	4-F	4-SF ₅
Q-31	H	H	H	6-Cl	4-Cl	4-Cl
Q-31	H	H	H	6-Cl	4-Cl	4-CF ₃
Q-31	H	H	H	6-Cl	4-Cl	4-OCF ₃
Q-31	H	H	H	6-Cl	4-Cl	4-SF ₅
Q-31	H	H	H	6-Cl	4-CN	4-Cl
Q-31	H	H	H	6-Cl	4-CN	4-CF ₃
Q-31	H	H	H	6-Cl	4-CN	4-OCF ₃
Q-31	H	H	H	6-Cl	4-CN	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	6-Cl	4-CF ₃	4-Cl
Q-31	H	H	H	6-Cl	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-Cl	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-Cl	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-Cl	4-NO ₂	4-Cl
Q-31	H	H	H	6-Cl	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-Cl	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-Cl	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-Br	4-F	4-Cl
Q-31	H	H	H	6-Br	4-F	4-CF ₃
Q-31	H	H	H	6-Br	4-F	4-OCF ₃
Q-31	H	H	H	6-Br	4-F	4-SF ₅
Q-31	H	H	H	6-Br	4-Cl	4-Cl
Q-31	H	H	H	6-Br	4-Cl	4-CF ₃
Q-31	H	H	H	6-Br	4-Cl	4-OCF ₃
Q-31	H	H	H	6-Br	4-Cl	4-SF ₅
Q-31	H	H	H	6-Br	4-CN	4-Cl
Q-31	H	H	H	6-Br	4-CN	4-CF ₃
Q-31	H	H	H	6-Br	4-CN	4-OCF ₃
Q-31	H	H	H	6-Br	4-CN	4-SF ₅
Q-31	H	H	H	6-Br	4-CF ₃	4-Cl
Q-31	H	H	H	6-Br	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-Br	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-Br	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-Br	4-NO ₂	4-Cl
Q-31	H	H	H	6-Br	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-Br	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-Br	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-CH ₃	4-F	4-Cl
Q-31	H	H	H	6-CH ₃	4-F	4-CF ₃
Q-31	H	H	H	6-CH ₃	4-F	4-OCF ₃
Q-31	H	H	H	6-CH ₃	4-F	4-SF ₅
Q-31	H	H	H	6-CH ₃	4-Cl	4-Cl
Q-31	H	H	H	6-CH ₃	4-Cl	4-CF ₃
Q-31	H	H	H	6-CH ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	6-CH ₃	4-Cl	4-SF ₅
Q-31	H	H	H	6-CH ₃	4-CN	4-Cl
Q-31	H	H	H	6-CH ₃	4-CN	4-CF ₃
Q-31	H	H	H	6-CH ₃	4-CN	4-OCF ₃
Q-31	H	H	H	6-CH ₃	4-CN	4-SF ₅
Q-31	H	H	H	6-CH ₃	4-CF ₃	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	6-CH ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-CH ₃	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-CH ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-CH ₃	4-NO ₂	4-Cl
Q-31	H	H	H	6-CH ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-CH ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-CH ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-CF ₃	4-F	4-Cl
Q-31	H	H	H	6-CF ₃	4-F	4-CF ₃
Q-31	H	H	H	6-CF ₃	4-F	4-OCF ₃
Q-31	H	H	H	6-CF ₃	4-F	4-SF ₅
Q-31	H	H	H	6-CF ₃	4-Cl	4-Cl
Q-31	H	H	H	6-CF ₃	4-Cl	4-CF ₃
Q-31	H	H	H	6-CF ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	6-CF ₃	4-Cl	4-SF ₅
Q-31	H	H	H	6-CF ₃	4-CN	4-Cl
Q-31	H	H	H	6-CF ₃	4-CN	4-CF ₃
Q-31	H	H	H	6-CF ₃	4-CN	4-OCF ₃
Q-31	H	H	H	6-CF ₃	4-CN	4-SF ₅
Q-31	H	H	H	6-CF ₃	4-CF ₃	4-Cl
Q-31	H	H	H	6-CF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-CF ₃	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-CF ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-CF ₃	4-NO ₂	4-Cl
Q-31	H	H	H	6-CF ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-CF ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-CF ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-OCHF ₂	4-F	4-Cl
Q-31	H	H	H	6-OCHF ₂	4-F	4-CF ₃
Q-31	H	H	H	6-OCHF ₂	4-F	4-OCF ₃
Q-31	H	H	H	6-OCHF ₂	4-F	4-SF ₅
Q-31	H	H	H	6-OCHF ₂	4-Cl	4-Cl
Q-31	H	H	H	6-OCHF ₂	4-Cl	4-CF ₃
Q-31	H	H	H	6-OCHF ₂	4-Cl	4-OCF ₃
Q-31	H	H	H	6-OCHF ₂	4-Cl	4-SF ₅
Q-31	H	H	H	6-OCHF ₂	4-CN	4-Cl
Q-31	H	H	H	6-OCHF ₂	4-CN	4-CF ₃
Q-31	H	H	H	6-OCHF ₂	4-CN	4-OCF ₃
Q-31	H	H	H	6-OCHF ₂	4-CN	4-SF ₅
Q-31	H	H	H	6-OCHF ₂	4-CF ₃	4-Cl
Q-31	H	H	H	6-OCHF ₂	4-CF ₃	4-CF ₃

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	6-OCF ₂	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-OCF ₂	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-OCF ₂	4-NO ₂	4-Cl
Q-31	H	H	H	6-OCF ₂	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-OCF ₂	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-OCF ₂	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-OCF ₂ Br	4-F	4-Cl
Q-31	H	H	H	6-OCF ₂ Br	4-F	4-CF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-F	4-OCF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-F	4-SF ₅
Q-31	H	H	H	6-OCF ₂ Br	4-Cl	4-Cl
Q-31	H	H	H	6-OCF ₂ Br	4-Cl	4-CF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-Cl	4-OCF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-Cl	4-SF ₅
Q-31	H	H	H	6-OCF ₂ Br	4-CN	4-Cl
Q-31	H	H	H	6-OCF ₂ Br	4-CN	4-CF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-CN	4-OCF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-CN	4-SF ₅
Q-31	H	H	H	6-OCF ₂ Br	4-CF ₃	4-Cl
Q-31	H	H	H	6-OCF ₂ Br	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-OCF ₂ Br	4-NO ₂	4-Cl
Q-31	H	H	H	6-OCF ₂ Br	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-OCF ₂ Br	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-OCF ₃	4-F	4-Cl
Q-31	H	H	H	6-OCF ₃	4-F	4-CF ₃
Q-31	H	H	H	6-OCF ₃	4-F	4-OCF ₃
Q-31	H	H	H	6-OCF ₃	4-F	4-SF ₅
Q-31	H	H	H	6-OCF ₃	4-Cl	4-Cl
Q-31	H	H	H	6-OCF ₃	4-Cl	4-CF ₃
Q-31	H	H	H	6-OCF ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	6-OCF ₃	4-Cl	4-SF ₅
Q-31	H	H	H	6-OCF ₃	4-CN	4-Cl
Q-31	H	H	H	6-OCF ₃	4-CN	4-CF ₃
Q-31	H	H	H	6-OCF ₃	4-CN	4-OCF ₃
Q-31	H	H	H	6-OCF ₃	4-CN	4-SF ₅
Q-31	H	H	H	6-OCF ₃	4-CF ₃	4-Cl
Q-31	H	H	H	6-OCF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-OCF ₃	4-CF ₃	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	6-OCF ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-OCF ₃	4-NO ₂	4-Cl
Q-31	H	H	H	6-OCF ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-OCF ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-OCF ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-OCH ₂ CF ₃	4-F	4-Cl
Q-31	H	H	H	6-OCH ₂ CF ₃	4-F	4-CF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-F	4-OCF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-F	4-SF ₅
Q-31	H	H	H	6-OCH ₂ CF ₃	4-Cl	4-Cl
Q-31	H	H	H	6-OCH ₂ CF ₃	4-Cl	4-CF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-Cl	4-OCF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-Cl	4-SF ₅
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CN	4-Cl
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CN	4-CF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CN	4-OCF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CN	4-SF ₅
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CF ₃	4-Cl
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-CF ₃	4-SF ₅
Q-31	H	H	H	6-OCH ₂ CF ₃	4-NO ₂	4-Cl
Q-31	H	H	H	6-OCH ₂ CF ₃	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-OCH ₂ CF ₃	4-NO ₂	4-SF ₅
Q-31	H	H	H	6-CN	4-F	4-Cl
Q-31	H	H	H	6-CN	4-F	4-CF ₃
Q-31	H	H	H	6-CN	4-F	4-OCF ₃
Q-31	H	H	H	6-CN	4-F	4-SF ₅
Q-31	H	H	H	6-CN	4-Cl	4-Cl
Q-31	H	H	H	6-CN	4-Cl	4-CF ₃
Q-31	H	H	H	6-CN	4-Cl	4-OCF ₃
Q-31	H	H	H	6-CN	4-Cl	4-SF ₅
Q-31	H	H	H	6-CN	4-CN	4-Cl
Q-31	H	H	H	6-CN	4-CN	4-CF ₃
Q-31	H	H	H	6-CN	4-CN	4-OCF ₃
Q-31	H	H	H	6-CN	4-CN	4-SF ₅
Q-31	H	H	H	6-CN	4-CF ₃	4-Cl
Q-31	H	H	H	6-CN	4-CF ₃	4-CF ₃
Q-31	H	H	H	6-CN	4-CF ₃	4-OCF ₃
Q-31	H	H	H	6-CN	4-CF ₃	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	H	H	H	6-CN	4-NO ₂	4-Cl
Q-31	H	H	H	6-CN	4-NO ₂	4-CF ₃
Q-31	H	H	H	6-CN	4-NO ₂	4-OCF ₃
Q-31	H	H	H	6-CN	4-NO ₂	4-SF ₅
Q-31	CH ₃	H	H	H	4-CN	4-Cl
Q-31	CH ₃	H	H	4-Cl	4-CF ₃	4-Cl
Q-31	CH ₃	H	H	4-CF ₃	4-NO ₂	4-CF ₃
Q-31	CH ₃	H	H	6-F	4-CN	4-CF ₃
Q-31	CH ₃	H	H	6-Cl	4-CF ₃	4-OCF ₃
Q-31	CH ₃	H	H	6-CF ₃	4-NO ₂	4-Cl
Q-31	CH ₃	H	H	6-OCHF ₂	4-CN	4-Cl
Q-31	CH ₃	H	H	6-OCF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	CH ₃	H	4-NO ₂	4-CF ₃
Q-31	H	H	CH ₃	4-Cl	4-CN	4-OCF ₃
Q-31	H	H	CH ₃	4-CF ₃	4-CF ₃	4-Cl
Q-31	H	H	CH ₃	6-F	4-NO ₂	4-Cl
Q-31	H	H	CH ₃	6-Cl	4-CN	4-CF ₃
Q-31	H	H	CH ₃	6-CF ₃	4-CF ₃	4-CF ₃
Q-31	H	H	CH ₃	6-OCHF ₂	4-NO ₂	4-OCF ₃
Q-31	H	H	CH ₃	6-OCF ₃	4-CN	4-Cl
Q-31	H	H	COOCH ₃	H	4-CF ₃	4-Cl
Q-31	H	H	COOCH ₃	4-Cl	4-NO ₂	4-CF ₃
Q-31	H	H	COOCH ₃	4-CF ₃	4-CN	4-CF ₃
Q-31	H	H	COOCH ₃	6-F	4-CF ₃	4-OCF ₃
Q-31	H	H	COOCH ₃	6-Cl	4-NO ₂	4-Cl
Q-31	H	H	COOCH ₃	6-CF ₃	4-CN	4-Cl
Q-31	H	H	COOCH ₃	6-OCHF ₂	4-CF ₃	4-CF ₃
Q-31	H	H	COOCH ₃	6-OCF ₃	4-NO ₂	4-CF ₃
Q-31	CH ₃	H	CH ₃	H	4-CN	4-OCF ₃
Q-31	CH ₃	H	CH ₃	4-Cl	4-CF ₃	4-Cl
Q-31	CH ₃	H	CH ₃	4-CF ₃	4-NO ₂	4-Cl
Q-31	CH ₃	H	CH ₃	6-F	4-CN	4-CF ₃
Q-31	CH ₃	H	CH ₃	6-Cl	4-CF ₃	4-CF ₃
Q-31	CH ₃	H	CH ₃	6-CF ₃	4-NO ₂	4-OCF ₃
Q-31	CH ₃	H	CH ₃	6-OCHF ₂	4-CN	4-Cl
Q-31	CH ₃	H	CH ₃	6-OCF ₃	4-CF ₃	4-Cl
Q-31	CH ₃	H	COOCH ₃	H	4-NO ₂	4-CF ₃
Q-31	CH ₃	H	COOCH ₃	4-Cl	4-CN	4-CF ₃
Q-31	CH ₃	H	COOCH ₃	4-CF ₃	4-CF ₃	4-OCF ₃
Q-31	CH ₃	H	COOCH ₃	6-F	4-NO ₂	4-Cl
Q-31	CH ₃	H	COOCH ₃	6-Cl	4-CN	4-Cl

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-31	CH ₃	H	COOCH ₃	6-CF ₃	4-CF ₃	4-CF ₃
Q-31	CH ₃	H	COOCH ₃	6-OCHF ₂	4-NO ₂	4-CF ₃
Q-31	CH ₃	H	COOCH ₃	6-OCF ₃	4-CN	4-OCF ₃
Q-32	H	H	H	H	4-F	4-Cl
Q-32	H	H	H	H	4-F	4-CF ₃
Q-32	H	H	H	H	4-F	4-OCF ₃
Q-32	H	H	H	H	4-F	4-SF ₅
Q-32	H	H	H	H	4-Cl	4-Cl
Q-32	H	H	H	H	4-Cl	4-CF ₃
Q-32	H	H	H	H	4-Cl	4-OCF ₃
Q-32	H	H	H	H	4-Cl	4-SF ₅
Q-32	H	H	H	H	4-CN	4-Cl
Q-32	H	H	H	H	4-CN	4-CF ₃
Q-32	H	H	H	H	4-CN	4-OCF ₃
Q-32	H	H	H	H	4-CN	4-SF ₅
Q-32	H	H	H	H	4-CF ₃	4-Cl
Q-32	H	H	H	H	4-CF ₃	4-CF ₃
Q-32	H	H	H	H	4-CF ₃	4-OCF ₃
Q-32	H	H	H	H	4-CF ₃	4-SF ₅
Q-32	H	H	H	H	4-NO ₂	4-Cl
Q-32	H	H	H	H	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-Cl	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-Cl	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-Cl	4-F	4-Cl
Q-32	H	H	H	5-Cl	4-F	4-CF ₃
Q-32	H	H	H	5-Cl	4-F	4-OCF ₃
Q-32	H	H	H	5-Cl	4-F	4-SF ₅
Q-32	H	H	H	5-Cl	4-Cl	4-Cl
Q-32	H	H	H	5-Cl	4-Cl	4-CF ₃
Q-32	H	H	H	5-Cl	4-Cl	4-OCF ₃
Q-32	H	H	H	5-Cl	4-Cl	4-SF ₅
Q-32	H	H	H	5-Cl	4-CN	4-Cl
Q-32	H	H	H	5-Cl	4-CN	4-CF ₃
Q-32	H	H	H	5-Cl	4-CN	4-OCF ₃
Q-32	H	H	H	5-Cl	4-CN	4-SF ₅
Q-32	H	H	H	5-Cl	4-CF ₃	4-Cl
Q-32	H	H	H	5-Cl	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-Cl	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-Cl	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-Cl	4-NO ₂	4-Cl
Q-32	H	H	H	5-Cl	4-NO ₂	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-32	H	H	H	5-Cl	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-Cl	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-Br	4-F	4-Cl
Q-32	H	H	H	5-Br	4-F	4-CF ₃
Q-32	H	H	H	5-Br	4-F	4-OCF ₃
Q-32	H	H	H	5-Br	4-F	4-SF ₅
Q-32	H	H	H	5-Br	4-Cl	4-Cl
Q-32	H	H	H	5-Br	4-Cl	4-CF ₃
Q-32	H	H	H	5-Br	4-Cl	4-OCF ₃
Q-32	H	H	H	5-Br	4-Cl	4-SF ₅
Q-32	H	H	H	5-Br	4-CN	4-Cl
Q-32	H	H	H	5-Br	4-CN	4-CF ₃
Q-32	H	H	H	5-Br	4-CN	4-OCF ₃
Q-32	H	H	H	5-Br	4-CN	4-SF ₅
Q-32	H	H	H	5-Br	4-CF ₃	4-Cl
Q-32	H	H	H	5-Br	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-Br	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-Br	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-Br	4-NO ₂	4-Cl
Q-32	H	H	H	5-Br	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-Br	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-Br	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-CF ₃	4-F	4-Cl
Q-32	H	H	H	5-CF ₃	4-F	4-CF ₃
Q-32	H	H	H	5-CF ₃	4-F	4-OCF ₃
Q-32	H	H	H	5-CF ₃	4-F	4-SF ₅
Q-32	H	H	H	5-CF ₃	4-Cl	4-Cl
Q-32	H	H	H	5-CF ₃	4-Cl	4-CF ₃
Q-32	H	H	H	5-CF ₃	4-Cl	4-OCF ₃
Q-32	H	H	H	5-CF ₃	4-Cl	4-SF ₅
Q-32	H	H	H	5-CF ₃	4-CN	4-Cl
Q-32	H	H	H	5-CF ₃	4-CN	4-CF ₃
Q-32	H	H	H	5-CF ₃	4-CN	4-OCF ₃
Q-32	H	H	H	5-CF ₃	4-CN	4-SF ₅
Q-32	H	H	H	5-CF ₃	4-CF ₃	4-Cl
Q-32	H	H	H	5-CF ₃	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-CF ₃	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-CF ₃	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-CF ₃	4-NO ₂	4-Cl
Q-32	H	H	H	5-CF ₃	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-CF ₃	4-NO ₂	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-32	H	H	H	5-CF ₃	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-OCHF ₂	4-F	4-Cl
Q-32	H	H	H	5-OCHF ₂	4-F	4-CF ₃
Q-32	H	H	H	5-OCHF ₂	4-F	4-OCF ₃
Q-32	H	H	H	5-OCHF ₂	4-F	4-SF ₅
Q-32	H	H	H	5-OCHF ₂	4-Cl	4-Cl
Q-32	H	H	H	5-OCHF ₂	4-Cl	4-CF ₃
Q-32	H	H	H	5-OCHF ₂	4-Cl	4-OCF ₃
Q-32	H	H	H	5-OCHF ₂	4-Cl	4-SF ₅
Q-32	H	H	H	5-OCHF ₂	4-CN	4-Cl
Q-32	H	H	H	5-OCHF ₂	4-CN	4-CF ₃
Q-32	H	H	H	5-OCHF ₂	4-CN	4-OCF ₃
Q-32	H	H	H	5-OCHF ₂	4-CN	4-SF ₅
Q-32	H	H	H	5-OCHF ₂	4-CF ₃	4-Cl
Q-32	H	H	H	5-OCHF ₂	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-OCHF ₂	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-OCHF ₂	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-OCHF ₂	4-NO ₂	4-Cl
Q-32	H	H	H	5-OCHF ₂	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-OCHF ₂	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-OCHF ₂	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-OCF ₂ Br	4-F	4-Cl
Q-32	H	H	H	5-OCF ₂ Br	4-F	4-CF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-F	4-OCF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-F	4-SF ₅
Q-32	H	H	H	5-OCF ₂ Br	4-Cl	4-Cl
Q-32	H	H	H	5-OCF ₂ Br	4-Cl	4-CF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-Cl	4-OCF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-Cl	4-SF ₅
Q-32	H	H	H	5-OCF ₂ Br	4-CN	4-Cl
Q-32	H	H	H	5-OCF ₂ Br	4-CN	4-CF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-CN	4-OCF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-CN	4-SF ₅
Q-32	H	H	H	5-OCF ₂ Br	4-CF ₃	4-Cl
Q-32	H	H	H	5-OCF ₂ Br	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-OCF ₂ Br	4-NO ₂	4-Cl
Q-32	H	H	H	5-OCF ₂ Br	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-OCF ₂ Br	4-NO ₂	4-SF ₅

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-32	H	H	H	5-OCF ₃	4-F	4-Cl
Q-32	H	H	H	5-OCF ₃	4-F	4-CF ₃
Q-32	H	H	H	5-OCF ₃	4-F	4-OCF ₃
Q-32	H	H	H	5-OCF ₃	4-F	4-SF ₅
Q-32	H	H	H	5-OCF ₃	4-Cl	4-Cl
Q-32	H	H	H	5-OCF ₃	4-Cl	4-CF ₃
Q-32	H	H	H	5-OCF ₃	4-Cl	4-OCF ₃
Q-32	H	H	H	5-OCF ₃	4-Cl	4-SF ₅
Q-32	H	H	H	5-OCF ₃	4-CN	4-Cl
Q-32	H	H	H	5-OCF ₃	4-CN	4-CF ₃
Q-32	H	H	H	5-OCF ₃	4-CN	4-OCF ₃
Q-32	H	H	H	5-OCF ₃	4-CN	4-SF ₅
Q-32	H	H	H	5-OCF ₃	4-CF ₃	4-Cl
Q-32	H	H	H	5-OCF ₃	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-OCF ₃	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-OCF ₃	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-OCF ₃	4-NO ₂	4-Cl
Q-32	H	H	H	5-OCF ₃	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-OCF ₃	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-OCF ₃	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-F	4-Cl
Q-32	H	H	H	5-OCH ₂ CF ₃	4-F	4-CF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-F	4-OCF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-F	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-Cl	4-Cl
Q-32	H	H	H	5-OCH ₂ CF ₃	4-Cl	4-CF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-Cl	4-OCF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-Cl	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CN	4-Cl
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CN	4-CF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CN	4-OCF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CN	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CF ₃	4-Cl
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CF ₃	4-CF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-CF ₃	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-NO ₂	4-Cl
Q-32	H	H	H	5-OCH ₂ CF ₃	4-NO ₂	4-CF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-NO ₂	4-OCF ₃
Q-32	H	H	H	5-OCH ₂ CF ₃	4-NO ₂	4-SF ₅
Q-32	H	H	H	5-OCH ₂ CF ₃	4-F	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-32	H	H	H	2-F	4-CN	4-CF ₃
Q-32	H	H	H	2-F	4-CN	4-OCF ₃
Q-32	H	H	H	2-F	4-CF ₃	4-Cl
Q-32	H	H	H	2-F	4-CF ₃	4-CF ₃
Q-32	H	H	H	2-F	4-NO ₂	4-OCF ₃
Q-32	H	H	H	6-Cl	4-CN	4-OCF ₃
Q-32	H	H	H	5,6-Cl ₂	4-CN	4-OCF ₃
Q-32	CH ₃	H	H	5-Cl	4-CN	4-Cl
Q-32	CH ₃	H	H	5-CF ₃	4-CF ₃	4-Cl
Q-32	CH ₃	H	H	5-OCHF ₂	4-NO ₂	4-CF ₃
Q-32	CH ₃	H	H	5-OCF ₃	4-CN	4-OCF ₃
Q-32	CH ₃	H	H	5-OCH ₂ CF ₃	4-CF ₃	4-Cl
Q-32	H	H	CH ₃	5-Cl	4-NO ₂	4-Cl
Q-32	H	H	CH ₃	5-CF ₃	4-CN	4-CF ₃
Q-32	H	H	CH ₃	5-OCHF ₂	4-CF ₃	4-OCF ₃
Q-32	H	H	CH ₃	5-OCF ₃	4-NO ₂	4-Cl
Q-32	H	H	CH ₃	5-OCH ₂ CF ₃	4-CN	4-Cl
Q-32	H	H	COOCH ₃	5-Cl	4-CF ₃	4-CF ₃
Q-32	H	H	COOCH ₃	5-CF ₃	4-NO ₂	4-OCF ₃
Q-32	H	H	COOCH ₃	5-OCHF ₂	4-CN	4-Cl
Q-32	H	H	COOCH ₃	5-OCF ₃	4-CF ₃	4-Cl
Q-32	H	H	COOCH ₃	5-OCH ₂ CF ₃	4-NO ₂	4-CF ₃
Q-32	CH ₃	H	CH ₃	5-Cl	4-CN	4-OCF ₃
Q-32	CH ₃	H	CH ₃	5-CF ₃	4-CF ₃	4-Cl
Q-32	CH ₃	H	CH ₃	5-OCHF ₂	4-NO ₂	4-Cl
Q-32	CH ₃	H	CH ₃	5-OCF ₃	4-CN	4-CF ₃
Q-32	CH ₃	H	CH ₃	5-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
Q-32	CH ₃	H	COOCH ₃	5-Cl	4-NO ₂	4-Cl
Q-32	CH ₃	H	COOCH ₃	5-CF ₃	4-CN	4-Cl
Q-32	CH ₃	H	COOCH ₃	5-OCHF ₂	4-CF ₃	4-CF ₃
Q-32	CH ₃	H	COOCH ₃	5-OCF ₃	4-NO ₂	4-OCF ₃
Q-32	CH ₃	H	COOCH ₃	5-OCH ₂ CF ₃	4-CN	4-Cl
Q-33	H	H	H	H	4-F	4-Cl
Q-33	H	H	H	H	4-F	4-CF ₃
Q-33	H	H	H	H	4-F	4-OCF ₃
Q-33	H	H	H	H	4-F	4-SF ₅
Q-33	H	H	H	H	4-Cl	4-Cl
Q-33	H	H	H	H	4-Cl	4-CF ₃
Q-33	H	H	H	H	4-Cl	4-OCF ₃
Q-33	H	H	H	H	4-Cl	4-SF ₅
Q-33	H	H	H	H	4-CN	4-Cl

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-33	H	H	H	H	4-CN	4-CF ₃
Q-33	H	H	H	H	4-CN	4-OCF ₃
Q-33	H	H	H	H	4-CN	4-SF ₅
Q-33	H	H	H	H	4-CF ₃	4-Cl
Q-33	H	H	H	H	4-CF ₃	4-CF ₃
Q-33	H	H	H	H	4-CF ₃	4-OCF ₃
Q-33	H	H	H	H	4-CF ₃	4-SF ₅
Q-33	H	H	H	H	4-NO ₂	4-Cl
Q-33	H	H	H	H	4-NO ₂	4-CF ₃
Q-33	H	H	H	H	4-NO ₂	4-OCF ₃
Q-33	H	H	H	H	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-F	4-F	4-Cl
Q-33	H	H	H	2-F	4-F	4-CF ₃
Q-33	H	H	H	2-F	4-F	4-OCF ₃
Q-33	H	H	H	2-F	4-F	4-SF ₅
Q-33	H	H	H	2-F	4-Cl	4-Cl
Q-33	H	H	H	2-F	4-Cl	4-CF ₃
Q-33	H	H	H	2-F	4-Cl	4-OCF ₃
Q-33	H	H	H	2-F	4-Cl	4-SF ₅
Q-33	H	H	H	2-F	4-CN	4-Cl
Q-33	H	H	H	2-F	4-CN	4-CF ₃
Q-33	H	H	H	2-F	4-CN	4-OCF ₃
Q-33	H	H	H	2-F	4-CN	4-SF ₅
Q-33	H	H	H	2-F	4-CF ₃	4-Cl
Q-33	H	H	H	2-F	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-F	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-F	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-F	4-NO ₂	4-Cl
Q-33	H	H	H	2-F	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-F	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-F	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-Cl	4-F	4-Cl
Q-33	H	H	H	2-Cl	4-F	4-CF ₃
Q-33	H	H	H	2-Cl	4-F	4-OCF ₃
Q-33	H	H	H	2-Cl	4-F	4-SF ₅
Q-33	H	H	H	2-Cl	4-Cl	4-Cl
Q-33	H	H	H	2-Cl	4-Cl	4-CF ₃
Q-33	H	H	H	2-Cl	4-Cl	4-OCF ₃
Q-33	H	H	H	2-Cl	4-Cl	4-SF ₅
Q-33	H	H	H	2-Cl	4-CN	4-Cl
Q-33	H	H	H	2-Cl	4-CN	4-CF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-33	H	H	H	2-Cl	4-CN	4-OCF ₃
Q-33	H	H	H	2-Cl	4-CN	4-SF ₅
Q-33	H	H	H	2-Cl	4-CF ₃	4-Cl
Q-33	H	H	H	2-Cl	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-Cl	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-Cl	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-Cl	4-NO ₂	4-Cl
Q-33	H	H	H	2-Cl	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-Cl	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-Cl	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-OCHF ₂	4-F	4-Cl
Q-33	H	H	H	2-OCHF ₂	4-F	4-CF ₃
Q-33	H	H	H	2-OCHF ₂	4-F	4-OCF ₃
Q-33	H	H	H	2-OCHF ₂	4-F	4-SF ₅
Q-33	H	H	H	2-OCHF ₂	4-Cl	4-Cl
Q-33	H	H	H	2-OCHF ₂	4-Cl	4-CF ₃
Q-33	H	H	H	2-OCHF ₂	4-Cl	4-OCF ₃
Q-33	H	H	H	2-OCHF ₂	4-Cl	4-SF ₅
Q-33	H	H	H	2-OCHF ₂	4-CN	4-Cl
Q-33	H	H	H	2-OCHF ₂	4-CN	4-CF ₃
Q-33	H	H	H	2-OCHF ₂	4-CN	4-OCF ₃
Q-33	H	H	H	2-OCHF ₂	4-CN	4-SF ₅
Q-33	H	H	H	2-OCHF ₂	4-CF ₃	4-Cl
Q-33	H	H	H	2-OCHF ₂	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-OCHF ₂	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-OCHF ₂	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-OCHF ₂	4-NO ₂	4-Cl
Q-33	H	H	H	2-OCHF ₂	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-OCHF ₂	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-OCHF ₂	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-OCF ₂ Br	4-F	4-Cl
Q-33	H	H	H	2-OCF ₂ Br	4-F	4-CF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-F	4-OCF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-F	4-SF ₅
Q-33	H	H	H	2-OCF ₂ Br	4-Cl	4-Cl
Q-33	H	H	H	2-OCF ₂ Br	4-Cl	4-CF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-Cl	4-OCF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-Cl	4-SF ₅
Q-33	H	H	H	2-OCF ₂ Br	4-CN	4-Cl
Q-33	H	H	H	2-OCF ₂ Br	4-CN	4-CF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-CN	4-OCF ₃

Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-33	H	H	H	2-OCF ₂ Br	4-CN	4-SF ₅
Q-33	H	H	H	2-OCF ₂ Br	4-CF ₃	4-Cl
Q-33	H	H	H	2-OCF ₂ Br	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-OCF ₂ Br	4-NO ₂	4-Cl
Q-33	H	H	H	2-OCF ₂ Br	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-OCF ₂ Br	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-OCF ₃	4-F	4-Cl
Q-33	H	H	H	2-OCF ₃	4-F	4-CF ₃
Q-33	H	H	H	2-OCF ₃	4-F	4-OCF ₃
Q-33	H	H	H	2-OCF ₃	4-F	4-SF ₅
Q-33	H	H	H	2-OCF ₃	4-Cl	4-Cl
Q-33	H	H	H	2-OCF ₃	4-Cl	4-CF ₃
Q-33	H	H	H	2-OCF ₃	4-Cl	4-OCF ₃
Q-33	H	H	H	2-OCF ₃	4-Cl	4-SF ₅
Q-33	H	H	H	2-OCF ₃	4-CN	4-Cl
Q-33	H	H	H	2-OCF ₃	4-CN	4-CF ₃
Q-33	H	H	H	2-OCF ₃	4-CN	4-OCF ₃
Q-33	H	H	H	2-OCF ₃	4-CN	4-SF ₅
Q-33	H	H	H	2-OCF ₃	4-CF ₃	4-Cl
Q-33	H	H	H	2-OCF ₃	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-OCF ₃	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-OCF ₃	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-OCF ₃	4-NO ₂	4-Cl
Q-33	H	H	H	2-OCF ₃	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-OCF ₃	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-OCF ₃	4-NO ₂	4-SF ₅
Q-33	H	H	H	2-OCH ₂ CF ₃	4-F	4-Cl
Q-33	H	H	H	2-OCH ₂ CF ₃	4-F	4-CF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-F	4-OCF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-F	4-SF ₅
Q-33	H	H	H	2-OCH ₂ CF ₃	4-Cl	4-Cl
Q-33	H	H	H	2-OCH ₂ CF ₃	4-Cl	4-CF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-Cl	4-OCF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-Cl	4-SF ₅
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CN	4-Cl
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CN	4-CF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CN	4-OCF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CN	4-SF ₅

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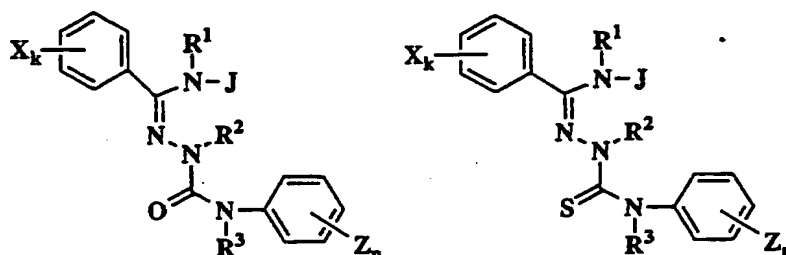
Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CF ₃	4-Cl
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CF ₃	4-CF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-CF ₃	4-SF ₅
Q-33	H	H	H	2-OCH ₂ CF ₃	4-NO ₂	4-Cl
Q-33	H	H	H	2-OCH ₂ CF ₃	4-NO ₂	4-CF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-NO ₂	4-OCF ₃
Q-33	H	H	H	2-OCH ₂ CF ₃	4-NO ₂	4-SF ₅
Q-33	CH ₃	H	H	2-F	4-CN	4-Cl
Q-33	CH ₃	H	H	2-Cl	4-CF ₃	4-Cl
Q-33	CH ₃	H	H	2-OCHF ₂	4-NO ₂	4-CF ₃
Q-33	CH ₃	H	H	2-OCF ₃	4-CN	4-OCF ₃
Q-33	CH ₃	H	H	2-OCH ₂ CF ₃	4-CF ₃	4-Cl
Q-33	H	H	CH ₃	2-F	4-NO ₂	4-Cl
Q-33	H	H	CH ₃	2-Cl	4-CN	4-CF ₃
Q-33	H	H	CH ₃	2-OCHF ₂	4-CF ₃	4-OCF ₃
Q-33	H	H	CH ₃	2-OCF ₃	4-NO ₂	4-Cl
Q-33	H	H	CH ₃	2-OCH ₂ CF ₃	4-CN	4-Cl
Q-33	H	H	COOCH ₃	2-F	4-CF ₃	4-CF ₃
Q-33	H	H	COOCH ₃	2-Cl	4-NO ₂	4-OCF ₃
Q-33	H	H	COOCH ₃	2-OCHF ₂	4-CN	4-Cl
Q-33	H	H	COOCH ₃	2-OCF ₃	4-CF ₃	4-Cl
Q-33	H	H	COOCH ₃	2-OCH ₂ CF ₃	4-NO ₂	4-CF ₃
Q-33	CH ₃	H	CH ₃	2-F	4-CN	4-OCF ₃
Q-33	CH ₃	H	CH ₃	2-Cl	4-CF ₃	4-Cl
Q-33	CH ₃	H	CH ₃	2-OCHF ₂	4-NO ₂	4-Cl
Q-33	CH ₃	H	CH ₃	2-OCF ₃	4-CN	4-CF ₃
Q-33	CH ₃	H	CH ₃	2-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
Q-33	CH ₃	H	COOCH ₃	2-F	4-NO ₂	4-Cl
Q-33	CH ₃	H	COOCH ₃	2-Cl	4-CN	4-Cl
Q-33	CH ₃	H	COOCH ₃	2-OCHF ₂	4-CF ₃	4-CF ₃
Q-33	CH ₃	H	COOCH ₃	2-OCF ₃	4-NO ₂	4-OCF ₃
Q-33	CH ₃	H	COOCH ₃	2-OCH ₂ CF ₃	4-CN	4-Cl
Q-34	H	H	H	H	4-CN	4-OCF ₃
Q-34	H	H	H	4-Cl	4-CN	4-OCF ₃
Q-34	H	H	H	4-CF ₃	4-CN	4-OCF ₃
Q-34	H	H	H	4-CF ₃	4-CF ₃	4-OCF ₃
Q-35	H	H	H	H	4-Cl	4-OCF ₃
Q-35	H	H	H	2-CH ₃	4-Cl	4-OCF ₃
Q-35	H	H	H	6-CF ₃	4-Cl	4-OCF ₃
Q-35	H	H	H	6-CF ₃	4-NO ₂	4-OCF ₃

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Q	R ¹	R ²	R ³	X _k	Y _m	Z _n
Q-35	H	H	H	6-OCHF ₂	4-CN	4-OCF ₃
Q-36	H	H	H	H	4-CN	4-OCF ₃

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Table 3



wherein J, R¹, R², R³, X_k, Y_m, and Z_n are identified in the following Table.

J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-1	H	H	H	H	4-CH ₃	4-Cl
J-1	H	H	H	3-F	4-COOCH ₃	4-CF ₃
J-1	H	H	H	3-Cl	4-CN	4-OCF ₃
J-1	H	H	H	3-CF ₃	4-SO ₂ CH(CH ₃) ₂	4-SF ₅
J-1	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-Cl
J-1	H	H	H	H	5-Br	4-CF ₃
J-1	H	H	H	3-F	5-COOC(CH ₃) ₃	4-OCF ₃
J-1	H	H	H	3-Cl	5-CN	4-SF ₅
J-1	H	H	H	3-CF ₃	5-SO ₂ CH ₃	4-Cl
J-1	H	H	H	3-OCH ₂ CF ₃	4-CN, 5-SCH ₃	4-CF ₃
J-2	H	H	H	H	5-CN	4-OCF ₃
J-2	H	H	H	3-F	5-NO ₂	4-SF ₅
J-3	H	H	H	3-Cl	4-COOC ₂ H ₅	4-Cl
J-3	H	H	H	3-CF ₃	5-Br	4-CF ₃
J-3	H	H	H	3-OCH ₂ CF ₃	5-COOCH ₃	4-OCF ₃
J-3	H	H	H	H	5-CN	4-SF ₅
J-3	H	H	H	3-F	4-COOCH ₃ , 5-CH ₃	4-Cl
J-6	H	H	H	3-Cl	H(R ⁵ =CH ₃)	4-CF ₃
J-6	H	H	H	3-CF ₃	H(R ⁵ =CHF ₂)	4-OCF ₃
J-6	H	H	H	3-OCH ₂ CF ₃	H(R ⁵ =CF ₂ Br)	4-SF ₅
J-6	H	H	H	H	H(R ⁵ =CF ₃)	4-Cl
J-6	H	H	H	3-F	5-COOCH ₃ (R ⁵ =CH ₃)	4-CF ₃
J-7	H	H	H	H	5-Cl	4-Cl
J-7	H	H	H	H	5-Cl	4-CF ₃
J-7	H	H	H	H	5-Cl	4-OCF ₃

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	H	5-Cl	4-SF ₅
J-7	H	H	H	H	5-Br	4-Cl
J-7	H	H	H	H	5-Br	4-CF ₃
J-7	H	H	H	H	5-Br	4-OCF ₃
J-7	H	H	H	H	5-Br	4-SF ₅
J-7	H	H	H	H	5-CH ₃	4-Cl
J-7	H	H	H	H	5-CH ₃	4-CF ₃
J-7	H	H	H	H	5-CH ₃	4-OCF ₃
J-7	H	H	H	H	5-CH ₃	4-SF ₅
J-7	H	H	H	H	5-CF ₃	4-Cl
J-7	H	H	H	H	5-CF ₃	4-CF ₃
J-7	H	H	H	H	5-CF ₃	4-OCF ₃
J-7	H	H	H	H	5-CF ₃	4-SF ₅
J-7	H	H	H	H	5-COOCH ₃	4-Cl
J-7	H	H	H	H	5-COOCH ₃	4-CF ₃
J-7	H	H	H	H	5-COOCH ₃	4-OCF ₃
J-7	H	H	H	H	5-COOCH ₃	4-SF ₅
J-7	H	H	H	H	4-CH ₃	4-Cl
J-7	H	H	H	H	4-CH ₃	4-CF ₃
J-7	H	H	H	H	4-CH ₃	4-OCF ₃
J-7	H	H	H	H	4-CH ₃	4-SF ₅
J-7	H	H	H	H	4-C(CH ₃) ₃	4-Cl
J-7	H	H	H	H	4-C(CH ₃) ₃	4-CF ₃
J-7	H	H	H	H	4-C(CH ₃) ₃	4-OCF ₃
J-7	H	H	H	H	4-C(CH ₃) ₃	4-SF ₅
J-7	H	H	H	H	4-CF ₃	4-Cl
J-7	H	H	H	H	4-CF ₃	4-CF ₃
J-7	H	H	H	H	4-CF ₃	4-OCF ₃
J-7	H	H	H	H	4-CF ₃	4-SF ₅
J-7	H	H	H	H	4-COOC ₂ H ₅	4-Cl
J-7	H	H	H	H	4-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	H	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	H	4-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	H	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	H	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	H	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	H	4-CH ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	H	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	H	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	H	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	H	4-CF ₃ , 5-COOC ₂ H ₅	4-SF ₅

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	H	4-CH=CH-CH=CH-5	4-Cl
J-7	H	H	H	H	4-CH=CH-CH=CH-5	4-CF ₃
J-7	H	H	H	H	4-CH=CH-CH=CH-5	4-OCF ₃
J-7	H	H	H	H	4-CH=CH-CH=CH-5	4-SF ₅
J-7	H	H	H	3-F	5-Cl	4-Cl
J-7	H	H	H	3-F	5-Cl	4-CF ₃
J-7	H	H	H	3-F	5-Cl	4-OCF ₃
J-7	H	H	H	3-F	5-Cl	4-SF ₅
J-7	H	H	H	3-F	5-Br	4-Cl
J-7	H	H	H	3-F	5-Br	4-CF ₃
J-7	H	H	H	3-F	5-Br	4-OCF ₃
J-7	H	H	H	3-F	5-Br	4-SF ₅
J-7	H	H	H	3-F	5-CH ₃	4-Cl
J-7	H	H	H	3-F	5-CH ₃	4-CF ₃
J-7	H	H	H	3-F	5-CH ₃	4-OCF ₃
J-7	H	H	H	3-F	5-CH ₃	4-SF ₅
J-7	H	H	H	3-F	5-CF ₃	4-Cl
J-7	H	H	H	3-F	5-CF ₃	4-CF ₃
J-7	H	H	H	3-F	5-CF ₃	4-OCF ₃
J-7	H	H	H	3-F	5-CF ₃	4-SF ₅
J-7	H	H	H	3-F	5-COOCH ₃	4-Cl
J-7	H	H	H	3-F	5-COOCH ₃	4-CF ₃
J-7	H	H	H	3-F	5-COOCH ₃	4-OCF ₃
J-7	H	H	H	3-F	5-COOCH ₃	4-SF ₅
J-7	H	H	H	3-F	4-CH ₃	4-Cl
J-7	H	H	H	3-F	4-CH ₃	4-CF ₃
J-7	H	H	H	3-F	4-CH ₃	4-OCF ₃
J-7	H	H	H	3-F	4-CH ₃	4-SF ₅
J-7	H	H	H	3-F	4-C(CH ₃) ₃	4-Cl
J-7	H	H	H	3-F	4-C(CH ₃) ₃	4-CF ₃
J-7	H	H	H	3-F	4-C(CH ₃) ₃	4-OCF ₃
J-7	H	H	H	3-F	4-C(CH ₃) ₃	4-SF ₅
J-7	H	H	H	3-F	4-CF ₃	4-Cl
J-7	H	H	H	3-F	4-CF ₃	4-CF ₃
J-7	H	H	H	3-F	4-CF ₃	4-OCF ₃
J-7	H	H	H	3-F	4-CF ₃	4-SF ₅
J-7	H	H	H	3-F	4-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-F	4-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-F	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-F	4-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-F	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-F	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-F	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-F	4-CF ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-F	4-CH=CH-CH=CH-5	4-Cl
J-7	H	H	H	3-F	4-CH=CH-CH=CH-5	4-CF ₃
J-7	H	H	H	3-F	4-CH=CH-CH=CH-5	4-OCF ₃
J-7	H	H	H	3-F	4-CH=CH-CH=CH-5	4-SF ₅
J-7	H	H	H	3-Cl	5-Cl	4-Cl
J-7	H	H	H	3-Cl	5-Cl	4-CF ₃
J-7	H	H	H	3-Cl	5-Cl	4-OCF ₃
J-7	H	H	H	3-Cl	5-Cl	4-SF ₅
J-7	H	H	H	3-Cl	5-Br	4-Cl
J-7	H	H	H	3-Cl	5-Br	4-CF ₃
J-7	H	H	H	3-Cl	5-Br	4-OCF ₃
J-7	H	H	H	3-Cl	5-Br	4-SF ₅
J-7	H	H	H	3-Cl	5-CH ₃	4-Cl
J-7	H	H	H	3-Cl	5-CH ₃	4-CF ₃
J-7	H	H	H	3-Cl	5-CH ₃	4-OCF ₃
J-7	H	H	H	3-Cl	5-CH ₃	4-SF ₅
J-7	H	H	H	3-Cl	5-CF ₃	4-Cl
J-7	H	H	H	3-Cl	5-CF ₃	4-CF ₃
J-7	H	H	H	3-Cl	5-CF ₃	4-OCF ₃
J-7	H	H	H	3-Cl	5-CF ₃	4-SF ₅
J-7	H	H	H	3-Cl	5-COOCH ₃	4-Cl
J-7	H	H	H	3-Cl	5-COOCH ₃	4-CF ₃
J-7	H	H	H	3-Cl	5-COOCH ₃	4-OCF ₃
J-7	H	H	H	3-Cl	5-COOCH ₃	4-SF ₅
J-7	H	H	H	3-Cl	4-CH ₃	4-Cl
J-7	H	H	H	3-Cl	4-CH ₃	4-CF ₃
J-7	H	H	H	3-Cl	4-CH ₃	4-OCF ₃
J-7	H	H	H	3-Cl	4-CH ₃	4-SF ₅
J-7	H	H	H	3-Cl	4-C(CH ₃) ₃	4-Cl
J-7	H	H	H	3-Cl	4-C(CH ₃) ₃	4-CF ₃
J-7	H	H	H	3-Cl	4-C(CH ₃) ₃	4-OCF ₃
J-7	H	H	H	3-Cl	4-C(CH ₃) ₃	4-SF ₅
J-7	H	H	H	3-Cl	4-CF ₃	4-Cl
J-7	H	H	H	3-Cl	4-CF ₃	4-CF ₃

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	3-Cl	4-CF ₃	4-OCF ₃
J-7	H	H	H	3-Cl	4-CF ₃	4-SF ₅
J-7	H	H	H	3-Cl	4-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-Cl	4-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-Cl	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-Cl	4-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-Cl	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-Cl	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-Cl	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-Cl	4-CH ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-Cl	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-Cl	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-Cl	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-Cl	4-CF ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-Cl	4-CH=CH-CH=CH-5	4-Cl
J-7	H	H	H	3-Cl	4-CH=CH-CH=CH-5	4-CF ₃
J-7	H	H	H	3-Cl	4-CH=CH-CH=CH-5	4-OCF ₃
J-7	H	H	H	3-Cl	4-CH=CH-CH=CH-5	4-SF ₅
J-7	H	H	H	3-CF ₃	5-Cl	4-Cl
J-7	H	H	H	3-CF ₃	5-Cl	4-CF ₃
J-7	H	H	H	3-CF ₃	5-Cl	4-OCF ₃
J-7	H	H	H	3-CF ₃	5-Cl	4-SF ₅
J-7	H	H	H	3-CF ₃	5-Br	4-Cl
J-7	H	H	H	3-CF ₃	5-Br	4-CF ₃
J-7	H	H	H	3-CF ₃	5-Br	4-OCF ₃
J-7	H	H	H	3-CF ₃	5-Br	4-SF ₅
J-7	H	H	H	3-CF ₃	5-CH ₃	4-Cl
J-7	H	H	H	3-CF ₃	5-CH ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	5-CH ₃	4-OCF ₃
J-7	H	H	H	3-CF ₃	5-CH ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	5-CF ₃	4-Cl
J-7	H	H	H	3-CF ₃	5-CF ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	5-CF ₃	4-OCF ₃
J-7	H	H	H	3-CF ₃	5-CF ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	5-COOCH ₃	4-Cl
J-7	H	H	H	3-CF ₃	5-COOCH ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	5-COOCH ₃	4-OCF ₃
J-7	H	H	H	3-CF ₃	5-COOCH ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	4-CH ₃	4-Cl
J-7	H	H	H	3-CF ₃	4-CH ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	4-CH ₃	4-OCF ₃

J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	3-CF ₃	4-CH ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	4-C(CH ₃) ₃	4-Cl
J-7	H	H	H	3-CF ₃	4-C(CH ₃) ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	4-C(CH ₃) ₃	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-C(CH ₃) ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	4-CF ₃	4-Cl
J-7	H	H	H	3-CF ₃	4-CF ₃	4-CF ₃
J-7	H	H	H	3-CF ₃	4-CF ₃	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-CF ₃	4-SF ₅
J-7	H	H	H	3-CF ₃	4-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-CF ₃	4-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-CF ₃	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-CF ₃	4-CH=CH-CH=CH-5	4-Cl
J-7	H	H	H	3-CF ₃	4-CH=CH-CH=CH-5	4-CF ₃
J-7	H	H	H	3-CF ₃	4-CH=CH-CH=CH-5	4-OCF ₃
J-7	H	H	H	3-CF ₃	4-CH=CH-CH=CH-5	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	5-Br	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	5-Br	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-Br	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-Br	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	5-CH ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	5-CH ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-CH ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-CH ₃	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-SF ₅

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	H	3-OCH ₂ CF ₃	5-COOCH ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	5-COOCH ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-COOCH ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	5-COOCH ₃	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-C(CH ₃) ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-C(CH ₃) ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-C(CH ₃) ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-C(CH ₃) ₃	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-SF ₅
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH=CH-CH=CH-5	4-Cl
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH=CH-CH=CH-5	4-CF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH=CH-CH=CH-5	4-OCF ₃
J-7	H	H	H	3-OCH ₂ CF ₃	4-CH=CH-CH=CH-5	4-SF ₅
J-7	CH ₃	H	H	H	5-Cl	4-Cl
J-7	CH ₃	H	H	3-F	5-Br	4-CF ₃
J-7	CH ₃	H	H	3-Cl	5-CF ₃	4-OCF ₃
J-7	CH ₃	H	H	3-CF ₃	5-COOCH ₃	4-Cl
J-7	CH ₃	H	H	3-OCH ₂ CF ₃	4-CF ₃	4-CF ₃
J-7	CH ₃	H	H	H	4-COOC ₂ H ₅	4-OCF ₃
J-7	CH ₃	H	H	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	CH ₃	H	H	3-Cl	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	CH ₃	3-CF ₃	5-Cl	4-OCF ₃

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-7	H	H	CH ₃	3-OCH ₂ CF ₃	5-Br	4-Cl
J-7	H	H	CH ₃	H	5-CF ₃	4-CF ₃
J-7	H	H	CH ₃	3-F	5-COOCH ₃	4-OCF ₃
J-7	H	H	CH ₃	3-Cl	4-CF ₃	4-Cl
J-7	H	H	CH ₃	3-CF ₃	4-COOC ₂ H ₅	4-Cl
J-7	H	H	CH ₃	3-OCH ₂ CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	H	H	CH ₃	H	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	COOCH ₃	3-F	5-Cl	4-Cl
J-7	H	H	COOCH ₃	3-Cl	5-Br	4-CF ₃
J-7	H	H	COOCH ₃	3-CF ₃	5-CF ₃	4-OCF ₃
J-7	H	H	COOCH ₃	3-OCH ₂ CF ₃	5-COOCH ₃	4-Cl
J-7	H	H	COOCH ₃	H	4-CF ₃	4-CF ₃
J-7	H	H	COOCH ₃	3-F	4-COOC ₂ H ₅	4-OCF ₃
J-7	H	H	COOCH ₃	3-Cl	4-CH ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	H	H	COOCH ₃	3-CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	CH ₃	H	CH ₃	3-OCH ₂ CF ₃	5-Cl	4-OCF ₃
J-7	CH ₃	H	CH ₃	H	5-Br	4-Cl
J-7	CH ₃	H	CH ₃	3-F	5-CF ₃	4-CF ₃
J-7	CH ₃	H	CH ₃	3-Cl	5-COOCH ₃	4-OCF ₃
J-7	CH ₃	H	CH ₃	3-CF ₃	4-CF ₃	4-Cl
J-7	CH ₃	H	CH ₃	3-OCH ₂ CF ₃	4-COOC ₂ H ₅	4-CF ₃
J-7	CH ₃	H	CH ₃	H	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-7	CH ₃	H	CH ₃	3-F	4-CF ₃ , 5-COOC ₂ H ₅	4-Cl
J-7	CH ₃	H	COOCH ₃	3-Cl	5-Cl	4-CF ₃
J-7	CH ₃	H	COOCH ₃	3-CF ₃	5-Br	4-OCF ₃
J-7	CH ₃	H	COOCH ₃	3-OCH ₂ CF ₃	5-CF ₃	4-Cl
J-7	CH ₃	H	COOCH ₃	H	5-COOCH ₃	4-CF ₃
J-7	CH ₃	H	COOCH ₃	3-F	4-CF ₃	4-OCF ₃
J-7	CH ₃	H	COOCH ₃	3-Cl	4-COOC ₂ H ₅	4-Cl
J-7	CH ₃	H	COOCH ₃	3-CF ₃	4-CH ₃ , 5-COOC ₂ H ₅	4-CF ₃
J-7	CH ₃	H	COOCH ₃	3-OCH ₂ CF ₃	4-CF ₃ , 5-COOC ₂ H ₅	4-OCF ₃
J-8	H	H	H	H	2-CH ₃	4-Cl
J-8	H	H	H	3-F	2-C ₆ H ₅	4-CF ₃
J-8	H	H	H	3-Cl	2-CH ₂ C ₆ H ₅	4-OCF ₃
J-8	H	H	H	3-CF ₃	2-SCH ₃	4-SF ₅
J-10	H	H	H	3-OCH ₂ CF ₃	4-CH ₃	4-Cl
J-10	H	H	H	H	5-C ₆ H ₅	4-CF ₃
J-10	H	H	H	3-F	4, 5-(CH ₃) ₂	4-OCF ₃
J-10	H	H	H	3-Cl	4-CH=CH-CH=CH-5	4-SF ₅
J-13	H	H	H	3-CF ₃	H(R ⁵ =CH ₃)	4-Cl
J-13	H	H	H	3-OCH ₂ CF ₃	H(R ⁵ =C ₆ H ₅)	4-CF ₃

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-13	H	H	H	H	5-CH ₃ (R ⁵ =C ₆ H ₅)	4-OCF ₃
J-14	H	H	H	3-F	H (R ⁵ =CH ₃)	4-SF ₅
J-14	H	H	H	3-Cl	H (R ⁵ =CH ₂ F)	4-Cl
J-14	H	H	H	3-CF ₃	H (R ⁵ =CHF ₂)	4-CF ₃
J-14	H	H	H	3-OCH ₂ CF ₃	H (R ⁵ =CF ₂ Br)	4-OCF ₃
J-14	H	H	H	H	H (R ⁵ =CF ₃)	4-SF ₅
J-14	H	H	H	3-F	H (R ⁵ =CH ₂ COOC ₂ H ₅)	4-Cl
J-14	H	H	H	3-Cl	H (R ⁵ =CH ₂ CH ₂ Cl)	4-CF ₃
J-15	H	H	H	3-CF ₃	3-CH ₃ (R ⁵ =CH ₃)	4-OCF ₃
J-17	H	H	H	3-OCH ₂ CF ₃	H (R ⁵ =CH ₃)	4-SF ₅
J-17	H	H	H	H	2-CH ₃ (R ⁵ =CH ₃)	4-Cl
J-17	H	H	H	3-F	H (R ⁵ =SO ₂ CH ₃)	4-CF ₃
J-17	H	H	H	3-Cl	2-CH ₃ (R ⁵ =CH ₂ CH ₂ CN)	4-OCF ₃
J-20	H	H	H	H	H (R ⁵ =SO ₂ CH ₃)	4-SF ₅
J-20	H	H	H	3-F	5-SCH ₃ (R ⁵ =CH ₃)	4-Cl
J-21	H	H	H	3-Cl	5-CH ₃	4-CF ₃
J-21	H	H	H	3-CF ₃	5-C (CH ₃) ₃	4-OCF ₃
J-21	H	H	H	3-OCH ₂ CF ₃	5-C ₆ H ₅	4-SF ₅
J-23	H	H	H	H	H	4-Cl
J-23	H	H	H	3-F	3-CH ₃	4-CF ₃
J-23	H	H	H	3-Cl	3-CH ₃ , 4-Cl	4-OCF ₃
J-24	H	H	H	3-CF ₃	H	4-SF ₅
J-26	H	H	H	3-OCH ₂ CF ₃	3-CH ₃	4-Cl
J-27	H	H	H	H	5-Cl	4-CF ₃
J-27	H	H	H	3-F	5-Br	4-OCF ₃
J-27	H	H	H	3-Cl	5-I	4-SF ₅
J-27	H	H	H	3-CF ₃	5-CH ₃	4-Cl
J-27	H	H	H	3-OCH ₂ CF ₃	5-COOC ₂ H ₅	4-CF ₃
J-27	H	H	H	H	5-CN	4-Cl
J-27	H	H	H	H	5-CN	4-CF ₃
J-27	H	H	H	H	5-CN	4-OCF ₃
J-27	H	H	H	H	5-CN	4-SF ₅
J-27	H	H	H	H	5-CF ₃	4-Cl
J-27	H	H	H	H	5-CF ₃	4-CF ₃
J-27	H	H	H	H	5-CF ₃	4-OCF ₃
J-27	H	H	H	H	5-CF ₃	4-SF ₅
J-27	H	H	H	H	5-NO ₂	4-Cl
J-27	H	H	H	H	5-NO ₂	4-CF ₃
J-27	H	H	H	H	5-NO ₂	4-OCF ₃
J-27	H	H	H	H	5-NO ₂	4-SF ₅
J-27	H	H	H	3-F	5-CN	4-Cl

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-27	H	H	H	3-F	5-CN	4-CF ₃
J-27	H	H	H	3-F	5-CN	4-OCF ₃
J-27	H	H	H	3-F	5-CN	4-SF ₅
J-27	H	H	H	3-F	5-CF ₃	4-Cl
J-27	H	H	H	3-F	5-CF ₃	4-CF ₃
J-27	H	H	H	3-F	5-CF ₃	4-OCF ₃
J-27	H	H	H	3-F	5-CF ₃	4-SF ₅
J-27	H	H	H	3-F	5-NO ₂	4-Cl
J-27	H	H	H	3-F	5-NO ₂	4-CF ₃
J-27	H	H	H	3-F	5-NO ₂	4-OCF ₃
J-27	H	H	H	3-F	5-NO ₂	4-SF ₅
J-27	H	H	H	3-Cl	5-CN	4-Cl
J-27	H	H	H	3-Cl	5-CN	4-CF ₃
J-27	H	H	H	3-Cl	5-CN	4-OCF ₃
J-27	H	H	H	3-Cl	5-CN	4-SF ₅
J-27	H	H	H	3-Cl	5-CF ₃	4-Cl
J-27	H	H	H	3-Cl	5-CF ₃	4-CF ₃
J-27	H	H	H	3-Cl	5-CF ₃	4-OCF ₃
J-27	H	H	H	3-Cl	5-CF ₃	4-SF ₅
J-27	H	H	H	3-Cl	5-NO ₂	4-Cl
J-27	H	H	H	3-Cl	5-NO ₂	4-CF ₃
J-27	H	H	H	3-Cl	5-NO ₂	4-OCF ₃
J-27	H	H	H	3-Cl	5-NO ₂	4-SF ₅
J-27	H	H	H	3-CF ₃	5-CN	4-Cl
J-27	H	H	H	3-CF ₃	5-CN	4-CF ₃
J-27	H	H	H	3-CF ₃	5-CN	4-OCF ₃
J-27	H	H	H	3-CF ₃	5-CN	4-SF ₅
J-27	H	H	H	3-CF ₃	5-CF ₃	4-Cl
J-27	H	H	H	3-CF ₃	5-CF ₃	4-CF ₃
J-27	H	H	H	3-CF ₃	5-CF ₃	4-OCF ₃
J-27	H	H	H	3-CF ₃	5-CF ₃	4-SF ₅
J-27	H	H	H	3-CF ₃	5-NO ₂	4-Cl
J-27	H	H	H	3-CF ₃	5-NO ₂	4-CF ₃
J-27	H	H	H	3-CF ₃	5-NO ₂	4-OCF ₃
J-27	H	H	H	3-CF ₃	5-NO ₂	4-SF ₅
J-27	H	H	H	3-OCH ₂ CF ₃	5-CN	4-Cl
J-27	H	H	H	3-OCH ₂ CF ₃	5-CN	4-CF ₃
J-27	H	H	H	3-OCH ₂ CF ₃	5-CN	4-OCF ₃
J-27	H	H	H	3-OCH ₂ CF ₃	5-CN	4-SF ₅
J-27	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-Cl
J-27	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-CF ₃

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J	R ¹	R ²	R ³	X _x	Y _m	Z _n
J-27	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-OCF ₃
J-27	H	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-SF ₅
J-27	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-Cl
J-27	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-CF ₃
J-27	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-OCF ₃
J-27	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-SF ₅
J-27	CH ₃	H	H	H	5-CF ₃	4-Cl
J-27	CH ₃	H	H	3-F	5-COOC ₂ H ₅	4-CF ₃
J-27	CH ₃	H	H	3-Cl	5-CN	4-OCF ₃
J-27	CH ₃	H	H	3-CF ₃	5-NO ₂	4-Cl
J-27	CH ₃	H	H	3-OCH ₂ CF ₃	5-CF ₃	4-CF ₃
J-27	H	H	CH ₃	H	5-COOC ₂ H ₅	4-OCF ₃
J-27	H	H	CH ₃	3-F	5-CN	4-Cl
J-27	H	H	CH ₃	3-Cl	5-NO ₂	4-CF ₃
J-27	H	H	CH ₃	3-CF ₃	5-CF ₃	4-OCF ₃
J-27	H	H	CH ₃	3-OCH ₂ CF ₃	5-COOC ₂ H ₅	4-Cl
J-27	H	H	COOCH ₃	H	5-CN	4-CF ₃
J-27	H	H	COOCH ₃	3-F	5-NO ₂	4-OCF ₃
J-27	H	H	COOCH ₃	3-Cl	5-CF ₃	4-Cl
J-27	H	H	COOCH ₃	3-CF ₃	5-COOC ₂ H ₅	4-CF ₃
J-27	H	H	COOCH ₃	3-OCH ₂ CF ₃	5-CN	4-OCF ₃
J-27	CH ₃	H	CH ₃	H	5-NO ₂	4-Cl
J-27	CH ₃	H	CH ₃	3-F	5-CF ₃	4-CF ₃
J-27	CH ₃	H	CH ₃	3-Cl	5-COOC ₂ H ₅	4-OCF ₃
J-27	CH ₃	H	CH ₃	3-CF ₃	5-CN	4-Cl
J-27	CH ₃	H	CH ₃	3-OCH ₂ CF ₃	5-NO ₂	4-CF ₃
J-27	CH ₃	H	COOCH ₃	H	5-CF ₃	4-OCF ₃
J-27	CH ₃	H	COOCH ₃	3-F	5-COOC ₂ H ₅	4-Cl
J-27	CH ₃	H	COOCH ₃	3-Cl	5-CN	4-CF ₃
J-27	CH ₃	H	COOCH ₃	3-CF ₃	5-NO ₂	4-OCF ₃
J-27	CH ₃	H	COOCH ₃	3-OCH ₂ CF ₃	5-CF ₃	4-Cl
J-28	H	H	H	H	6-Cl	4-Cl
J-28	H	H	H	3-F	6-Br	4-CF ₃
J-28	H	H	H	3-Cl	6-I	4-OCF ₃
J-28	H	H	H	3-CF ₃	6-CN	4-SF ₅
J-28	H	H	H	3-OCH ₂ CF ₃	6-OCH ₂ CF ₃	4-Cl
J-28	H	H	H	H	6-OC ₆ H ₅	4-CF ₃
J-28	H	H	H	3-F	6-SC ₆ H ₅	4-OCF ₃
J-30	H	H	H	H	5-Cl	4-Cl
J-30	H	H	H	H	5-Cl	4-CF ₃
J-30	H	H	H	H	5-Cl	4-OCF ₃

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-30	H	H	H	H	5-Cl	4-SF ₅
J-30	H	H	H	H	5-Br	4-Cl
J-30	H	H	H	H	5-Br	4-CF ₃
J-30	H	H	H	H	5-Br	4-OCF ₃
J-30	H	H	H	H	5-Br	4-SF ₅
J-30	H	H	H	H	5-NO ₂	4-Cl
J-30	H	H	H	H	5-NO ₂	4-CF ₃
J-30	H	H	H	H	5-NO ₂	4-OCF ₃
J-30	H	H	H	H	5-NO ₂	4-SF ₅
J-30	H	H	H	3-F	5-Cl	4-Cl
J-30	H	H	H	3-F	5-Cl	4-CF ₃
J-30	H	H	H	3-F	5-Cl	4-OCF ₃
J-30	H	H	H	3-F	5-Cl	4-SF ₅
J-30	H	H	H	3-F	5-Br	4-Cl
J-30	H	H	H	3-F	5-Br	4-CF ₃
J-30	H	H	H	3-F	5-Br	4-OCF ₃
J-30	H	H	H	3-F	5-Br	4-SF ₅
J-30	H	H	H	3-F	5-NO ₂	4-Cl
J-30	H	H	H	3-F	5-NO ₂	4-CF ₃
J-30	H	H	H	3-F	5-NO ₂	4-OCF ₃
J-30	H	H	H	3-F	5-NO ₂	4-SF ₅
J-30	H	H	H	3-Cl	5-Cl	4-Cl
J-30	H	H	H	3-Cl	5-Cl	4-CF ₃
J-30	H	H	H	3-Cl	5-Cl	4-OCF ₃
J-30	H	H	H	3-Cl	5-Cl	4-SF ₅
J-30	H	H	H	3-Cl	5-Br	4-Cl
J-30	H	H	H	3-Cl	5-Br	4-CF ₃
J-30	H	H	H	3-Cl	5-Br	4-OCF ₃
J-30	H	H	H	3-Cl	5-Br	4-SF ₅
J-30	H	H	H	3-Cl	5-NO ₂	4-Cl
J-30	H	H	H	3-Cl	5-NO ₂	4-CF ₃
J-30	H	H	H	3-Cl	5-NO ₂	4-OCF ₃
J-30	H	H	H	3-Cl	5-NO ₂	4-SF ₅
J-30	H	H	H	3-CF ₃	5-Cl	4-Cl
J-30	H	H	H	3-CF ₃	5-Cl	4-CF ₃
J-30	H	H	H	3-CF ₃	5-Cl	4-OCF ₃
J-30	H	H	H	3-CF ₃	5-Cl	4-SF ₅
J-30	H	H	H	3-CF ₃	5-Br	4-Cl
J-30	H	H	H	3-CF ₃	5-Br	4-CF ₃
J-30	H	H	H	3-CF ₃	5-Br	4-OCF ₃
J-30	H	H	H	3-CF ₃	5-Br	4-SF ₅

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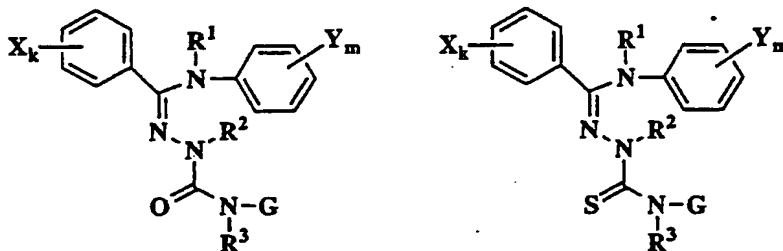
J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-30	H	H	H	3-CF ₃	5-NO ₂	4-Cl
J-30	H	H	H	3-CF ₃	5-NO ₂	4-CF ₃
J-30	H	H	H	3-CF ₃	5-NO ₂	4-OCF ₃
J-30	H	H	H	3-CF ₃	5-NO ₂	4-SF ₅
J-30	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-Cl
J-30	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-CF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-OCF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-Cl	4-SF ₅
J-30	H	H	H	3-OCH ₂ CF ₃	5-Br	4-Cl
J-30	H	H	H	3-OCH ₂ CF ₃	5-Br	4-CF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-Br	4-OCF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-Br	4-SF ₅
J-30	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-Cl
J-30	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-CF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-OCF ₃
J-30	H	H	H	3-OCH ₂ CF ₃	5-NO ₂	4-SF ₅
J-30	CH ₃	H	H	H	5-Cl	4-Cl
J-30	CH ₃	H	H	3-F	5-Br	4-CF ₃
J-30	CH ₃	H	H	3-Cl	5-NO ₂	4-OCF ₃
J-30	CH ₃	H	H	3-CF ₃	5-NO ₂	4-Cl
J-30	CH ₃	H	H	3-OCH ₂ CF ₃	5-Cl	4-CF ₃
J-30	H	H	CH ₃	H	5-Br	4-OCF ₃
J-30	H	H	CH ₃	3-F	5-NO ₂	4-Cl
J-30	H	H	CH ₃	3-Cl	5-NO ₂	4-CF ₃
J-30	H	H	CH ₃	3-CF ₃	5-Cl	4-OCF ₃
J-30	H	H	CH ₃	3-OCH ₂ CF ₃	5-Br	4-Cl
J-30	H	H	COOCH ₃	H	5-NO ₂	4-CF ₃
J-30	H	H	COOCH ₃	3-F	5-NO ₂	4-OCF ₃
J-30	H	H	COOCH ₃	3-Cl	5-Cl	4-Cl
J-30	H	H	COOCH ₃	3-CF ₃	5-Br	4-CF ₃
J-30	H	H	COOCH ₃	3-OCH ₂ CF ₃	5-NO ₂	4-OCF ₃
J-30	CH ₃	H	CH ₃	H	5-NO ₂	4-Cl
J-30	CH ₃	H	CH ₃	3-F	5-Cl	4-CF ₃
J-30	CH ₃	H	CH ₃	3-Cl	5-Br	4-OCF ₃
J-30	CH ₃	H	CH ₃	3-CF ₃	5-NO ₂	4-Cl
J-30	CH ₃	H	CH ₃	3-OCH ₂ CF ₃	5-NO ₂	4-CF ₃
J-30	CH ₃	H	COOCH ₃	H	5-Cl	4-OCF ₃
J-30	CH ₃	H	COOCH ₃	3-F	5-Br	4-Cl
J-30	CH ₃	H	COOCH ₃	3-Cl	5-NO ₂	4-CF ₃
J-30	CH ₃	H	COOCH ₃	3-CF ₃	5-NO ₂	4-OCF ₃
J-30	CH ₃	H	COOCH ₃	3-OCH ₂ CF ₃	5-Cl	4-Cl

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J	R ¹	R ²	R ³	X _k	Y _m	Z _n
J-32	H	H	H	H	H	4-CF ₃
J-32	H	H	H	3-F	2-COOCH ₃	4-OCF ₃
J-32	H	H	H	3-Cl	2-CN	4-Cl
J-32	H	H	H	3-CF ₃	2-CN	4-CF ₃
J-32	H	H	H	3-OCH ₂ CF ₃	2-CN	4-OCF ₃
J-32	H	H	H	H	2-CN	4-Cl
J-32	H	H	H	3-F	2-SCH ₃	4-CF ₃
J-32	H	H	H	3-Cl	2-C ₆ H ₅	4-OCF ₃

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Table 4



wherein G, R¹, R², R³, X_k, Y_m and Z_n are identified in the following Table.

G	R ¹	R ²	R ³	X _k	Y _m	Z _n
G-2	H	H	H	H	CN	5-Cl
G-2	H	H	H	H	CN	5-Br
G-2	H	H	H	H	CN	5-CF ₃
G-2	H	H	H	H	CF ₃	5-Cl
G-2	H	H	H	H	CF ₃	5-Br
G-2	H	H	H	H	CF ₃	5-CF ₃
G-2	H	H	H	H	NO ₂	5-Cl
G-2	H	H	H	H	NO ₂	5-Br
G-2	H	H	H	H	NO ₂	5-CF ₃
G-2	H	H	H	3-F	CN	5-Cl
G-2	H	H	H	3-F	CN	5-Br
G-2	H	H	H	3-F	CN	5-CF ₃
G-2	H	H	H	3-F	CF ₃	5-Cl
G-2	H	H	H	3-F	CF ₃	5-Br
G-2	H	H	H	3-F	CF ₃	5-CF ₃
G-2	H	H	H	3-F	NO ₂	5-Cl
G-2	H	H	H	3-F	NO ₂	5-Br
G-2	H	H	H	3-F	NO ₂	5-CF ₃
G-2	H	H	H	3-Cl	CN	5-Cl
G-2	H	H	H	3-Cl	CN	5-Br
G-2	H	H	H	3-Cl	CN	5-CF ₃
G-2	H	H	H	3-Cl	CF ₃	5-Cl
G-2	H	H	H	3-Cl	CF ₃	5-Br
G-2	H	H	H	3-Cl	CF ₃	5-CF ₃
G-2	H	H	H	3-Cl	NO ₂	5-Cl

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G	R ¹	R ²	R ³	X _k	Y _m	Z _n
G-2	H	H	H	3-Cl	NO ₂	5-Br
G-2	H	H	H	3-Cl	NO ₂	5-CF ₃
G-2	H	H	H	3-CF ₃	CN	5-Cl
G-2	H	H	H	3-CF ₃	CN	5-Br
G-2	H	H	H	3-CF ₃	CN	5-CF ₃
G-2	H	H	H	3-CF ₃	CF ₃	5-Cl
G-2	H	H	H	3-CF ₃	CF ₃	5-Br
G-2	H	H	H	3-CF ₃	CF ₃	5-CF ₃
G-2	H	H	H	3-CF ₃	NO ₂	5-Cl
G-2	H	H	H	3-CF ₃	NO ₂	5-Br
G-2	H	H	H	3-CF ₃	NO ₂	5-CF ₃
G-2	CH ₃	H	H	H	CN	5-Cl
G-2	CH ₃	H	H	3-F	NO ₂	5-CF ₃
G-2	CH ₃	H	H	3-Cl	CF ₃	5-Cl
G-2	CH ₃	H	H	3-CF ₃	CN	5-CF ₃
G-2	H	H	CH ₃	H	NO ₂	5-Cl
G-2	H	H	CH ₃	3-F	CF ₃	5-CF ₃
G-2	H	H	CH ₃	3-Cl	CN	5-Cl
G-2	H	H	CH ₃	3-CF ₃	NO ₂	5-CF ₃
G-2	H	H	COOCH ₃	H	CF ₃	5-Cl
G-2	H	H	COOCH ₃	3-F	CN	5-CF ₃
G-2	H	H	COOCH ₃	3-Cl	NO ₂	5-Cl
G-2	H	H	COOCH ₃	3-CF ₃	CF ₃	5-CF ₃
G-2	CH ₃	H	CH ₃	H	CN	5-Cl
G-2	CH ₃	H	CH ₃	3-F	NO ₂	5-CF ₃
G-2	CH ₃	H	CH ₃	3-Cl	CF ₃	5-Cl
G-2	CH ₃	H	CH ₃	3-CF ₃	CN	5-CF ₃
G-2	CH ₃	H	COOCH ₃	H	NO ₂	5-Cl
G-2	CH ₃	H	COOCH ₃	3-F	CF ₃	5-CF ₃
G-2	CH ₃	H	COOCH ₃	3-Cl	CN	5-Cl
G-2	CH ₃	H	COOCH ₃	3-CF ₃	NO ₂	5-CF ₃
G-3	H	H	H	H	CN	6-Cl
G-3	H	H	H	H	CN	6-OCH ₃
G-3	H	H	H	H	NO ₂	6-Cl
G-3	H	H	H	H	NO ₂	6-OCH ₃
G-3	H	H	H	H	CF ₃	6-Cl
G-3	H	H	H	H	CF ₃	6-OCH ₃
G-3	H	H	H	3-F	CN	6-Cl
G-3	H	H	H	3-F	CN	6-OCH ₃
G-3	H	H	H	3-F	NO ₂	6-Cl
G-3	H	H	H	3-F	NO ₂	6-OCH ₃

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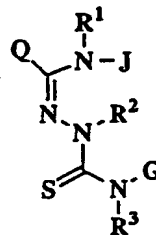
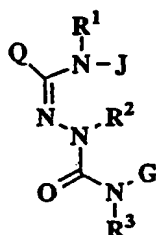
G	R ¹	R ²	R ³	X _k	Y _m	Z _n
G-3	H	H	H	3-F	CF ₃	6-Cl
G-3	H	H	H	3-F	CF ₃	6-OCH ₃
G-3	H	H	H	3-Cl	CN	6-Cl
G-3	H	H	H	3-Cl	CN	6-OCH ₃
G-3	H	H	H	3-Cl	NO ₂	6-Cl
G-3	H	H	H	3-Cl	NO ₂	6-OCH ₃
G-3	H	H	H	3-Cl	CF ₃	6-Cl
G-3	H	H	H	3-Cl	CF ₃	6-OCH ₃
G-3	H	H	H	3-CF ₃	CN	6-Cl
G-3	H	H	H	3-CF ₃	CN	6-OCH ₃
G-3	H	H	H	3-CF ₃	NO ₂	6-Cl
G-3	H	H	H	3-CF ₃	NO ₂	6-OCH ₃
G-3	H	H	H	3-CF ₃	CF ₃	6-Cl
G-3	H	H	H	3-CF ₃	CF ₃	6-OCH ₃
G-3	CH ₃	H	H	H	CN	6-Cl
G-3	CH ₃	H	H	3-F	NO ₂	6-Cl
G-3	CH ₃	H	H	3-Cl	CF ₃	6-Cl
G-3	CH ₃	H	H	3-CF ₃	CN	6-Cl
G-3	H	H	CH ₃	H	NO ₂	6-Cl
G-3	H	H	CH ₃	3-F	CF ₃	6-Cl
G-3	H	H	CH ₃	3-Cl	CN	6-Cl
G-3	H	H	CH ₃	3-CF ₃	NO ₂	6-Cl
G-3	H	H	COOCH ₃	H	CF ₃	6-Cl
G-3	H	H	COOCH ₃	3-F	CN	6-Cl
G-3	H	H	COOCH ₃	3-Cl	NO ₂	6-Cl
G-3	H	H	COOCH ₃	3-CF ₃	CF ₃	6-Cl
G-3	CH ₃	H	CH ₃	H	CN	6-Cl
G-3	CH ₃	H	CH ₃	3-F	NO ₂	6-Cl
G-3	CH ₃	H	CH ₃	3-Cl	CF ₃	6-Cl
G-3	CH ₃	H	CH ₃	3-CF ₃	CN	6-Cl
G-3	CH ₃	H	COOCH ₃	H	NO ₂	6-Cl
G-3	CH ₃	H	COOCH ₃	3-F	CF ₃	6-Cl
G-3	CH ₃	H	COOCH ₃	3-Cl	CN	6-Cl
G-3	CH ₃	H	COOCH ₃	3-CF ₃	NO ₂	6-Cl
G-5	H	H	H	H	CN	6-Cl
G-5	H	H	H	H	NO ₂	6-Cl
G-5	H	H	H	H	CF ₃	6-Cl
G-5	H	H	H	3-F	CN	6-Cl
G-5	H	H	H	3-F	NO ₂	6-Cl
G-5	H	H	H	3-F	CF ₃	6-Cl
G-5	H	H	H	3-Cl	CN	6-Cl

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G	R ¹	R ²	R ³	X _k	Y _m	Z _n
G-5	H	H	H	3-Cl	NO ₂	6-Cl
G-5	H	H	H	3-Cl	CF ₃	6-Cl
G-5	H	H	H	3-CF ₃	CN	6-Cl
G-5	H	H	H	3-CF ₃	NO ₂	6-Cl
G-5	H	H	H	3-CF ₃	CF ₃	6-Cl
G-5	CH ₃	H	H	H	CN	6-Cl
G-5	CH ₃	H	H	3-F	NO ₂	6-Cl
G-5	CH ₃	H	H	3-Cl	CF ₃	6-Cl
G-5	CH ₃	H	H	3-CF ₃	CN	6-Cl
G-5	H	H	CH ₃	H	NO ₂	6-Cl
G-5	H	H	CH ₃	3-F	CF ₃	6-Cl
G-5	H	H	CH ₃	3-Cl	CN	6-Cl
G-5	H	H	CH ₃	3-CF ₃	NO ₂	6-Cl
G-5	H	H	COOCH ₃	H	CF ₃	6-Cl
G-5	H	H	COOCH ₃	3-F	CN	6-Cl
G-5	H	H	COOCH ₃	3-Cl	NO ₂	6-Cl
G-5	H	H	COOCH ₃	3-CF ₃	CF ₃	6-Cl
G-5	CH ₃	H	CH ₃	H	CN	6-Cl
G-5	CH ₃	H	CH ₃	3-F	NO ₂	6-Cl
G-5	CH ₃	H	CH ₃	3-Cl	CF ₃	6-Cl
G-5	CH ₃	H	CH ₃	3-CF ₃	CN	6-Cl
G-5	CH ₃	H	COOCH ₃	H	NO ₂	6-Cl
G-5	CH ₃	H	COOCH ₃	3-F	CF ₃	6-Cl
G-5	CH ₃	H	COOCH ₃	3-Cl	CN	6-Cl
G-5	CH ₃	H	COOCH ₃	3-CF ₃	NO ₂	6-Cl

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Table 5



wherein Q, X_k , J, Y_m , G, Z_n , R^1 , R^2 and R^3 are identified in the following Table.

Q	X_k	J	Y_m	G	Z_n	R^1	R^2	R^3
Q-1	H	J-1	4-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-1	4-CN	G-2	5-CF ₃	H	H	H
Q-1	H	J-1	5-Cl	G-3	6-Cl	H	H	H
Q-1	H	J-1	5-CN	G-5	6-Cl	H	H	H
Q-1	H	J-2	5-CN	G-1	4-CF ₃	H	H	H
Q-1	H	J-2	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	H	J-3	5-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-6	H($R^5=CF_3$)	G-1	4-CF ₃	H	H	H
Q-1	H	J-7	5-Cl	G-1	4-OCF ₃	H	H	H
Q-1	H	J-7	5-Br	G-2	5-CF ₃	H	H	H
Q-1	H	J-7	5-CF ₃	G-3	6-Cl	H	H	H
Q-1	H	J-7	5-COOCH ₃	G-5	6-Cl	H	H	H
Q-1	H	J-7	4-CF ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-1	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-1	H	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-1	H	J-7	5-CF ₃	G-1	4-OCF ₃	CH ₃	H	H
Q-1	H	J-7	5-COOCH ₃	G-2	5-CF ₃	H	H	CH ₃
Q-1	H	J-7	4-CF ₃	G-3	6-Cl	H	H	COOCH ₃
Q-1	H	J-7	4-COOC ₂ H ₅	G-5	6-Cl	CH ₃	H	CH ₃
Q-1	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-1	4-CF ₃	CH ₃	H	COOCH ₃
Q-1	4-Cl	J-7	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-1	4-Cl	J-7	5-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-1	4-Cl	J-7	4-CF ₃	G-3	6-Cl	H	H	H
Q-1	4-Cl	J-7	4-COOC ₂ H ₅	G-5	6-Cl	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-1	4-Br	J-7	5-CF ₃	G-1	4-CF ₃	H	H	H
Q-1	4-Br	J-7	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-1	4-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-1	4-Br	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-1	4-CF ₃	J-7	5-COOC ₂ H ₅	G-1	4-OCF ₃	H	H	H
Q-1	4-CF ₃	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-1	4-CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-1	4-CF ₃	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-1	H	J-8	2-CH ₃	G-1	4-CF ₃	H	H	H
Q-1	H	J-10	4, 5-(CH ₃) ₂	G-1	4-OCF ₃	H	H	H
Q-1	H	J-13	H(R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-1	H	J-14	H(R ⁵ =CF ₃)	G-1	4-OCF ₃	H	H	H
Q-1	H	J-15	3-CH ₃ (R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-1	H	J-17	H(R ⁵ =SO ₂ CH ₃)	G-1	4-OCF ₃	H	H	H
Q-1	H	J-20	5-SCH ₃ (R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-1	H	J-21	5-CH ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-23	3-CH ₃	G-1	4-CF ₃	H	H	H
Q-1	H	J-24	H	G-1	4-OCF ₃	H	H	H
Q-1	H	J-26	3-CH ₃	G-1	4-CF ₃	H	H	H
Q-1	H	J-27	5-Cl	G-1	4-OCF ₃	H	H	H
Q-1	H	J-27	5-Br	G-2	5-CF ₃	H	H	H
Q-1	H	J-27	5-I	G-3	6-Cl	H	H	H
Q-1	H	J-27	5-CH ₃	G-5	6-Cl	H	H	H
Q-1	H	J-27	5-COOC ₂ H ₅	G-1	4-OCF ₃	H	H	H
Q-1	H	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-1	H	J-27	5-CN	G-3	6-Cl	H	H	H
Q-1	H	J-27	5-CN	G-5	6-Cl	H	H	H
Q-1	H	J-27	5-CN	G-1	4-OCF ₃	H	H	H
Q-1	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-1	H	J-27	5-CF ₃	G-3	6-Cl	H	H	H
Q-1	H	J-27	5-CF ₃	G-5	6-Cl	H	H	H
Q-1	H	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	H	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-1	H	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-1	H	J-27	5-NO ₂	G-1	4-OCF ₃	H	H	H
Q-1	H	J-27	5-CN	G-1	4-CF ₃	CH ₃	H	H
Q-1	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	CH ₃
Q-1	H	J-27	5-NO ₂	G-3	6-Cl	H	H	COOCH ₃
Q-1	H	J-27	5-CN	G-5	6-Cl	CH ₃	H	CH ₃
Q-1	H	J-27	5-CF ₃	G-1	4-OCF ₃	CH ₃	H	COOCH ₃

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-1	4-Cl	J-27	5-Cl	G-1	4-CF ₃	H	H	H
Q-1	4-Cl	J-27	5-Br	G-2	5-CF ₃	H	H	H
Q-1	4-Cl	J-27	5-I	G-3	6-Cl	H	H	H
Q-1	4-Cl	J-27	5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-1	4-Cl	J-27	5-CN	G-1	4-OCF ₃	H	H	H
Q-1	4-Cl	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-1	4-Cl	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-1	4-Br	J-27	5-Cl	G-5	6-Cl	H	H	H
Q-1	4-Br	J-27	5-Br	G-1	4-CF ₃	H	H	H
Q-1	4-Br	J-27	5-I	G-2	5-CF ₃	H	H	H
Q-1	4-Br	J-27	5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-1	4-Br	J-27	5-CN	G-5	6-Cl	H	H	H
Q-1	4-Br	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-1	4-Br	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	4-CF ₃	J-27	5-Cl	G-3	6-Cl	H	H	H
Q-1	4-CF ₃	J-27	5-Br	G-5	6-Cl	H	H	H
Q-1	4-CF ₃	J-27	5-I	G-1	4-CF ₃	H	H	H
Q-1	4-CF ₃	J-27	5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-1	4-CF ₃	J-27	5-CN	G-3	6-Cl	H	H	H
Q-1	4-CF ₃	J-27	5-CF ₃	G-5	6-Cl	H	H	H
Q-1	4-CF ₃	J-27	5-NO ₂	G-1	4-OCF ₃	H	H	H
Q-1	H	J-28	6-Cl	G-1	4-OCF ₃	H	H	H
Q-1	H	J-28	6-CN	G-2	5-CF ₃	H	H	H
Q-1	H	J-30	5-Cl	G-1	4-OCF ₃	H	H	H
Q-1	H	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-1	H	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-1	H	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-1	H	J-30	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-1	H	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	H	J-30	5-Cl	G-3	6-Cl	CH ₃	H	H
Q-1	H	J-30	5-Br	G-5	6-Cl	H	H	CH ₃
Q-1	H	J-30	5-NO ₂	G-1	4-OCF ₃	H	H	COOCH ₃
Q-1	H	J-30	5-Cl	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-1	H	J-30	5-Br	G-3	6-Cl	CH ₃	H	COOCH ₃
Q-1	4-Cl	J-30	5-Cl	G-5	6-Cl	H	H	H
Q-1	4-Cl	J-30	5-Br	G-1	4-CF ₃	H	H	H
Q-1	4-Cl	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	4-Cl	J-30	5-Cl	G-3	6-Cl	H	H	H
Q-1	4-Br	J-30	5-Br	G-5	6-Cl	H	H	H
Q-1	4-Br	J-30	5-NO ₂	G-1	4-OCF ₃	H	H	H
Q-1	4-Br	J-30	5-Cl	G-2	5-CF ₃	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-1	4-Br	J-30	5-Br	G-3	6-Cl	H	H	H
Q-1	4-CF ₃	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-1	4-CF ₃	J-30	5-Cl	G-1	4-CF ₃	H	H	H
Q-1	4-CF ₃	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-1	4-CF ₃	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-1	H	J-32	2-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-1	H	J-32	2-CN	G-2	5-CF ₃	H	H	H
Q-1	H	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-1	H	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-1	H	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-1	4-Cl	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-1	4-Cl	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-1	4-Cl	J-33	4-CN	G-5	6-Cl	H	H	H
Q-1	4-Br	J-33	4-NO ₂	G-2	5-CF ₃	H	H	H
Q-1	4-Br	J-33	4-CN	G-3	6-Cl	H	H	H
Q-1	4-Br	J-33	4-CF ₃	G-5	6-Cl	H	H	H
Q-1	4-CF ₃	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-1	4-CF ₃	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-1	4-CF ₃	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-1	H	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	H
Q-1	4-Cl	J-33	4-CF ₃	G-3	6-Cl	H	H	CH ₃
Q-1	4-Br	J-33	4-NO ₂	G-5	6-Cl	H	H	COOCH ₃
Q-1	4-CF ₃	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-1	H	J-33	4-CF ₃	G-3	6-Cl	CH ₃	H	COOCH ₃
Q-2	H	J-7	4-CF ₃	G-1	4-CF ₃	H	H	H
Q-2	H	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-2	H	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-2	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-2	5-Cl	J-7	4-CF ₃	G-1	4-OCF ₃	H	H	H
Q-2	5-Cl	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-2	5-Cl	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-2	5-Cl	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-2	5-Br	J-7	4-CF ₃	G-1	4-CF ₃	H	H	H
Q-2	5-Br	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-2	5-Br	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-2	5-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-2	H	J-7	4-CF ₃	G-1	4-OCF ₃	CH ₃	H	H
Q-2	5-Cl	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	CH ₃
Q-2	5-Br	J-7	5-Cl	G-3	6-Cl	H	H	COOCH ₃
Q-2	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	CH ₃	H	CH ₃
Q-2	5-Cl	J-7	4-CF ₃	G-1	4-CF ₃	CH ₃	H	COOCH ₃

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-2	H	J-13	H(R ⁵ =CH ₃)	G-1	4-OCF ₃	H	H	H
Q-2	H	J-27	5-CN	G-1	4-CF ₃	H	H	H
Q-2	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-2	H	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-2	H	J-27	5-CN	G-5	6-Cl	H	H	H
Q-2	5-Cl	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-2	5-Cl	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-2	5-Cl	J-27	5-CN	G-3	6-Cl	H	H	H
Q-2	5-Cl	J-27	5-CF ₃	G-5	6-Cl	H	H	H
Q-2	5-Br	J-27	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-2	5-Br	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-2	5-Br	J-27	5-CF ₃	G-3	6-Cl	H	H	H
Q-2	5-Br	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-2	H	J-27	5-CN	G-1	4-OCF ₃	CH ₃	H	H
Q-2	5-Cl	J-27	5-CF ₃	G-2	5-CF ₃	H	H	CH ₃
Q-2	5-Br	J-27	5-NO ₂	G-3	6-Cl	H	H	COOCH ₃
Q-2	H	J-27	5-CN	G-5	6-Cl	CH ₃	H	CH ₃
Q-2	5-Cl	J-27	5-CF ₃	G-1	4-CF ₃	CH ₃	H	COOCH ₃
Q-2	H	J-28	5-CN	G-1	4-OCF ₃	H	H	H
Q-2	H	J-30	5-Cl	G-1	4-CF ₃	H	H	H
Q-2	H	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-2	H	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-2	H	J-30	5-Cl	G-5	6-Cl	H	H	H
Q-2	5-Cl	J-30	5-Br	G-1	4-OCF ₃	H	H	H
Q-2	5-Cl	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-2	5-Cl	J-30	5-Cl	G-3	6-Cl	H	H	H
Q-2	5-Cl	J-30	5-Br	G-5	6-Cl	H	H	H
Q-2	5-Br	J-30	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-2	5-Br	J-30	5-Cl	G-2	5-CF ₃	H	H	H
Q-2	5-Br	J-30	5-Br	G-3	6-Cl	H	H	H
Q-2	5-Br	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-2	H	J-30	5-Cl	G-1	4-OCF ₃	CH ₃	H	H
Q-2	5-Cl	J-30	5-Br	G-2	5-CF ₃	H	H	CH ₃
Q-2	5-Br	J-30	5-NO ₂	G-3	6-Cl	H	H	COOCH ₃
Q-2	H	J-30	5-Br	G-5	6-Cl	CH ₃	H	CH ₃
Q-2	5-Cl	J-30	5-NO ₂	G-1	4-CF ₃	CH ₃	H	COOCH ₃
Q-2	H	J-32	2-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-2	H	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-2	H	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-2	H	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-2	5-Cl	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-2	5-Cl	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-2	5-Cl	J-33	4-CN	G-5	6-Cl	H	H	H
Q-2	5-Br	J-33	4-NO ₂	G-2	5-CF ₃	H	H	H
Q-2	5-Br	J-33	4-CN	G-3	6-Cl	H	H	H
Q-2	5-Br	J-33	4-CF ₃	G-5	6-Cl	H	H	H
Q-2	H	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	H
Q-2	5-Cl	J-33	4-CF ₃	G-3	6-Cl	H	H	CH ₃
Q-2	5-Br	J-33	4-NO ₂	G-5	6-Cl	H	H	COOCH ₃
Q-2	H	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-2	5-Cl	J-33	4-CF ₃	G-3	6-Cl	CH ₃	H	COOCH ₃
Q-3	H	J-7	4-CF ₃	G-1	4-OCF ₃	H	H	H
Q-3	H	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-3	H	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-3	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-3	4-Br	J-7	4-CF ₃	G-1	4-CF ₃	H	H	H
Q-3	4-Br	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-3	4-Br	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-3	4-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-3	5-Cl	J-7	4-CF ₃	G-1	4-OCF ₃	H	H	H
Q-3	5-Cl	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-3	5-Cl	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-3	5-Cl	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-3	5-Br	J-7	4-CF ₃	G-1	4-CF ₃	H	H	H
Q-3	5-Br	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-3	5-Br	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-3	5-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-3	H	J-7	4-CF ₃	G-1	4-OCF ₃	CH ₃	H	H
Q-3	4-Br	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	CH ₃
Q-3	5-Cl	J-7	5-Cl	G-3	6-Cl	H	H	COOCH ₃
Q-3	5-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	CH ₃	H	CH ₃
Q-3	5-Br	J-7	4-CF ₃	G-1	4-CF ₃	CH ₃	H	COOCH ₃
Q-3	H	J-13	H(R ⁵ =CH ₃)	G-1	4-OCF ₃	H	H	H
Q-3	H	J-27	5-CN	G-1	4-CF ₃	H	H	H
Q-3	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-3	H	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-3	H	J-27	5-CN	G-5	6-Cl	H	H	H
Q-3	4-Br	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-3	4-Br	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-3	4-Br	J-27	5-CN	G-3	6-Cl	H	H	H
Q-3	4-Br	J-27	5-CF ₃	G-5	6-Cl	H	H	H
Q-3	5-Cl	J-27	5-NO ₂	G-1	4-CF ₃	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-3	5-Cl	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-3	5-Cl	J-27	5-CF ₃	G-3	6-Cl	H	H	H
Q-3	5-Cl	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-3	5-Br	J-27	5-CN	G-1	4-OCF ₃	H	H	H
Q-3	5-Br	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-3	5-Br	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-3	5-Br	J-27	5-CN	G-5	6-Cl	H	H	H
Q-3	H	J-27	5-CF ₃	G-1	4-CF ₃	CH ₃	H	H
Q-3	4-Br	J-27	5-NO ₂	G-2	5-CF ₃	H	H	CH ₃
Q-3	5-Cl	J-27	5-CN	G-3	6-Cl	H	H	COOCH ₃
Q-3	5-Br	J-27	5-CF ₃	G-5	6-Cl	CH ₃	H	CH ₃
Q-3	H	J-27	5-NO ₂	G-1	4-OCF ₃	CH ₃	H	COOCH ₃
Q-3	H	J-28	5-CN	G-1	4-CF ₃	H	H	H
Q-3	H	J-30	5-Cl	G-1	4-OCF ₃	H	H	H
Q-3	H	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-3	H	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-3	H	J-30	5-CN	G-5	6-Cl	H	H	H
Q-3	4-Br	J-30	5-CF ₃	G-1	4-CF ₃	H	H	H
Q-3	4-Br	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-3	4-Br	J-30	5-CN	G-3	6-Cl	H	H	H
Q-3	4-Br	J-30	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-3	5-Cl	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-3	5-Cl	J-30	5-CN	G-3	6-Cl	H	H	H
Q-3	5-Cl	J-30	5-CF ₃	G-5	6-Cl	H	H	H
Q-3	5-Cl	J-30	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-3	5-Br	J-30	5-CN	G-2	5-CF ₃	H	H	H
Q-3	5-Br	J-30	5-CF ₃	G-3	6-Cl	H	H	H
Q-3	5-Br	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-3	5-Br	J-30	5-CN	G-1	4-OCF ₃	H	H	H
Q-3	H	J-30	5-CF ₃	G-2	5-CF ₃	CH ₃	H	H
Q-3	4-Br	J-30	5-NO ₂	G-3	6-Cl	H	H	CH ₃
Q-3	5-Cl	J-30	5-CN	G-5	6-Cl	H	H	COOCH ₃
Q-3	5-Br	J-30	5-CF ₃	G-1	4-CF ₃	CH ₃	H	CH ₃
Q-3	H	J-30	5-NO ₂	G-2	5-CF ₃	CH ₃	H	COOCH ₃
Q-3	H	J-32	2-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-3	H	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-3	H	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-3	H	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-3	4-Br	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-3	4-Br	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-3	4-Br	J-33	4-CN	G-5	6-Cl	H	H	H

Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-3	5-Cl	J-33	4-NO ₂	G-2	5-CF ₃	H	H	H
Q-3	5-Cl	J-33	4-CN	G-3	6-Cl	H	H	H
Q-3	5-Cl	J-33	4-CF ₃	G-5	6-Cl	H	H	H
Q-3	5-Br	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-3	5-Br	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-3	5-Br	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-3	H	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	H
Q-3	4-Br	J-33	4-CF ₃	G-3	6-Cl	H	H	CH ₃
Q-3	5-Cl	J-33	4-NO ₂	G-5	6-Cl	H	H	COOCH ₃
Q-3	5-Br	J-33	4-CN	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-3	H	J-33	4-CF ₃	G-3	6-Cl	CH ₃	H	COOCH ₃
Q-4	H	J-7	4-CF ₃	G-1	4-CF ₃	H	H	H
Q-4	H	J-13	H(R ⁵ =CH ₃)	G-2	5-CF ₃	H	H	H
Q-4	H	J-27	5-CN	G-3	6-Cl	H	H	H
Q-4	H	J-28	5-CN	G-5	6-Cl	H	H	H
Q-4	H	J-30	5-Cl	G-1	4-OCF ₃	H	H	H
Q-4	H	J-32	2-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-4	H	J-33	4-CN	G-3	6-Cl	H	H	H
Q-5	H	J-7	4-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-5	H	J-13	H(R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-5	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-5	H	J-28	5-CN	G-3	6-Cl	H	H	H
Q-5	H	J-30	5-Br	G-5	6-Cl	H	H	H
Q-5	H	J-32	2-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-5	H	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-7	H(R ⁴ =CF ₃)	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-8	H	J-7	5-Cl	G-5	6-Cl	H	H	H
Q-8	4-Cl	J-13	H(R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-8	4-Br	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-8	4-CH ₃	J-28	5-CN	G-3	6-Cl	H	H	H
Q-8	4-CF ₃	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-8	5-Cl	J-32	2-COOCH ₃	G-1	4-OCF ₃	H	H	H
Q-8	5-Br	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-8	5-CH ₃	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-8	5-CF ₃	J-33	4-CN	G-5	6-Cl	H	H	H
Q-9	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-9	2-Cl	J-13	H(R ⁵ =CH ₃)	G-1	4-CF ₃	H	H	H
Q-9	2-CH ₃	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-9	2-CF ₃	J-28	5-CN	G-3	6-Cl	H	H	H
Q-9	2-CF ₂ Cl	J-30	5-Cl	G-5	6-Cl	H	H	H
Q-9	2-CF ₂ Br	J-32	2-COOCH ₃	G-1	4-OCF ₃	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-9	2-Br	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-10	H	J-7	4-CF ₃	G-3	6-Cl	H	H	H
Q-10	2-Cl	J-13	H(R ⁵ =CH ₃)	G-5	6-Cl	H	H	H
Q-10	2-CH ₃	J-27	5-CF ₃	G-1	4-CF ₃	H	H	H
Q-10	2-CF ₃	J-28	5-CN	G-2	5-CF ₃	H	H	H
Q-10	2-CF ₂ Cl	J-30	5-Br	G-3	6-Cl	H	H	H
Q-10	2-CF ₂ Br	J-32	2-COOCH ₃	G-5	6-Cl	H	H	H
Q-10	2-Br	J-33	4-NO ₂	G-2	5-CF ₃	H	H	H
Q-11	4-CF ₃	J-7	4-CF ₃	G-1	4-OCF ₃	H	H	H
Q-12	2-CF ₃	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-13	2-CF ₃	J-30	5-Br	G-3	6-Cl	H	H	H
Q-14	3-CF ₃	J-33	4-CN	G-5	6-Cl	H	H	H
Q-15	H(R ⁴ =CF ₃)	J-7	5-CF ₃	G-5	6-Cl	H	H	H
Q-16	H(R ⁴ =CF ₃)	J-27	5-CF ₃	G-1	4-CF ₃	H	H	H
Q-17	H(R ⁴ =CH ₃)	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-18	4-Br	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-19	H(R ⁴ =CH ₃)	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-20	H(R ⁴ =CH ₃)	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-21	H(R ⁴ =CH ₃)	J-30	5-Br	G-1	4-OCF ₃	H	H	H
Q-22	3-Cl	J-33	4-NO ₂	G-2	5-CF ₃	H	H	H
Q-23	H(R ⁴ =CH ₃)	J-7	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-24	H(R ⁴ =CH ₃)	J-27	5-CN	G-3	6-Cl	H	H	H
Q-25	5-CH ₃	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-26	H	J-33	4-CN	G-5	6-Cl	H	H	H
Q-27	3-CH ₃	J-7	5-CF ₃	G-1	4-CF ₃	H	H	H
Q-28	5-Cl	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-29	H	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-30	3-CF ₃	J-33	4-CF ₃	G-3	6-Cl	H	H	H
Q-31	H	J-7	4-CF ₃	G-5	6-Cl	H	H	H
Q-31	4-Cl	J-27	5-CN	G-1	4-CF ₃	H	H	H
Q-31	4-CF ₃	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-31	6-F	J-33	4-CN	G-3	6-Cl	H	H	H
Q-31	6-Cl	J-33	4-CF ₃	G-5	6-Cl	H	H	H
Q-31	6-Br	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-1	4-OCF ₃	H	H	H
Q-31	6-CF ₃	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-31	6-OCHF ₂	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-31	6-OCF ₂ Br	J-33	4-NO ₂	G-5	6-Cl	H	H	H
Q-31	6-OCF ₃	J-27	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-31	6-OCH ₂ CF ₃	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-32	H	J-7	4-CF ₃	G-3	6-Cl	H	H	H
Q-32	5-Cl	J-27	5-CN	G-5	6-Cl	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-32	5-Br	J-30	5-Br	G-1	4-OCF ₃	H	H	H
Q-32	5-CF ₃	J-33	4-CN	G-2	5-CF ₃	H	H	H
Q-32	5-OCHF ₂	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-32	5-OCF ₂ Br	J-27	5-CF ₃	G-5	6-Cl	H	H	H
Q-32	5-OCF ₃	J-30	5-NO ₂	G-1	4-CF ₃	H	H	H
Q-32	5-OCH ₂ CF ₃	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-33	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-33	2-F	J-27	5-NO ₂	G-3	6-Cl	H	H	H
Q-33	2-Cl	J-30	5-Br	G-5	6-Cl	H	H	H
Q-33	2-OCHF ₂	J-33	4-NO ₂	G-3	6-Cl	H	H	H
Q-33	2-OCF ₂ Br	J-7	4-CF ₃	G-5	6-Cl	H	H	H
Q-33	2-OCF ₃	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-33	2-OCH ₂ CF ₃	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-34	4-Cl	J-33	5-CN	G-2	5-CF ₃	H	H	H
Q-34	4-CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-35	6-CF ₃	J-27	5-CF ₃	G-1	4-OCF ₃	H	H	H
Q-35	6-OCHF ₂	J-30	5-Br	G-1	4-CF ₃	H	H	H
Q-36	H	J-33	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	H	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-37	H	J-7	5-Br	G-5	6-Cl	H	H	H
Q-37	H	J-7	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	H	J-7	5-COOCH ₃	G-3	6-Cl	H	H	H
Q-37	H	J-7	4-CF ₃	G-5	6-Cl	H	H	H
Q-37	H	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	H	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-37	3-F	J-7	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-7	5-Br	G-3	6-Cl	H	H	H
Q-37	3-F	J-7	5-CF ₃	G-5	6-Cl	H	H	H
Q-37	3-F	J-7	5-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-7	4-CF ₃	G-3	6-Cl	H	H	H
Q-37	3-F	J-7	4-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-37	3-F	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-7	5-Cl	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-7	5-Br	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-7	5-CF ₃	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-7	5-COOCH ₃	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-7	4-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-7	4-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-37	3-Cl	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-7	5-Cl	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-7	5-Br	G-5	6-Cl	H	H	H
Q-37	3-CF ₃	J-7	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-7	5-COOCH ₃	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-7	4-CF ₃	G-5	6-Cl	H	H	H
Q-37	3-CF ₃	J-7	4-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	5-Br	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	5-CF ₃	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	5-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	4-CF ₃	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	4-COOC ₂ H ₅	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-7	4-CF ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	H	J-13	H(R ⁵ =CH ₃)	G-5	6-Cl	H	H	H
Q-37	3-F	J-13	H(R ⁵ =CH ₃)	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-13	H(R ⁵ =CH ₃)	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-13	H(R ⁵ =CH ₃)	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-13	H(R ⁵ =CH ₃)	G-2	5-CF ₃	H	H	H
Q-37	H	J-14	H(R ⁵ =CF ₃)	G-3	6-Cl	H	H	H
Q-37	3-F	J-14	H(R ⁵ =CF ₃)	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-14	H(R ⁵ =CF ₃)	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-14	H(R ⁵ =CF ₃)	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-14	H(R ⁵ =CF ₃)	G-5	6-Cl	H	H	H
Q-37	H	J-27	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	H	J-27	5-Br	G-2	5-CF ₃	H	H	H
Q-37	H	J-27	5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	H	J-27	5-CN	G-5	6-Cl	H	H	H
Q-37	H	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	H	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-27	5-Cl	G-3	6-Cl	H	H	H
Q-37	3-F	J-27	5-Br	G-5	6-Cl	H	H	H
Q-37	3-F	J-27	5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-27	5-CF ₃	G-3	6-Cl	H	H	H
Q-37	3-F	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-27	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-27	5-Br	G-2	5-CF ₃	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-37	3-Cl	J-27	5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-27	5-CN	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-27	5-Cl	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-27	5-Br	G-5	6-Cl	H	H	H
Q-37	3-CF ₃	J-27	5-COOC ₂ H ₅	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-27	5-CN	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-27	5-CF ₃	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-27	5-NO ₂	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-Br	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-COOC ₂ H ₅	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-CN	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-CF ₃	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-27	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-37	H	J-28	6-Cl	G-3	6-Cl	H	H	H
Q-37	H	J-28	6-Br	G-5	6-Cl	H	H	H
Q-37	H	J-28	6-CN	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-28	6-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-28	6-Br	G-3	6-Cl	H	H	H
Q-37	3-F	J-28	6-CN	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-28	6-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-28	6-Br	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-28	6-CN	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-28	6-Cl	G-5	6-Cl	H	H	H
Q-37	3-CF ₃	J-28	6-Br	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-28	6-CN	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-28	6-Cl	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-28	6-Br	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-28	6-CN	G-2	5-CF ₃	H	H	H
Q-37	H	J-30	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	H	J-30	5-Br	G-3	6-Cl	H	H	H
Q-37	H	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-37	3-F	J-30	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-30	5-NO ₂	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-30	5-Cl	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-30	5-Br	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-30	5-Cl	G-3	6-Cl	H	H	H

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-37	3-CF ₃	J-30	5-Br	G-5	6-Cl	H	H	H
Q-37	3-CF ₃	J-30	5-NO ₂	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-30	5-Cl	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-30	5-Br	G-3	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-30	5-NO ₂	G-5	6-Cl	H	H	H
Q-37	H	J-32	2-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-37	H	J-32	2-CN	G-2	5-CF ₃	H	H	H
Q-37	H	J-32	2-SCH ₃	G-3	6-Cl	H	H	H
Q-37	3-F	J-32	2-COOCH ₃	G-5	6-Cl	H	H	H
Q-37	3-F	J-32	2-CN	G-2	5-CF ₃	H	H	H
Q-37	3-F	J-32	2-SCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-Cl	J-32	2-COOCH ₃	G-3	6-Cl	H	H	H
Q-37	3-Cl	J-32	2-CN	G-5	6-Cl	H	H	H
Q-37	3-Cl	J-32	2-SCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-32	2-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-CF ₃	J-32	2-CN	G-3	6-Cl	H	H	H
Q-37	3-CF ₃	J-32	2-SCH ₃	G-5	6-Cl	H	H	H
Q-37	3-OCH ₂ CF ₃	J-32	2-COOCH ₃	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-32	2-CN	G-2	5-CF ₃	H	H	H
Q-37	3-OCH ₂ CF ₃	J-32	2-SCH ₃	G-3	6-Cl	H	H	H
Q-37	H	J-7	4-CF ₃	G-5	6-Cl	CH ₃	H	H
Q-37	3-F	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	CH ₃	H	H
Q-37	3-CF ₃	J-27	5-CN	G-2	5-CF ₃	CH ₃	H	H
Q-37	H	J-27	5-CF ₃	G-3	6-Cl	CH ₃	H	H
Q-37	3-F	J-27	5-NO ₂	G-5	6-Cl	CH ₃	H	H
Q-37	3-CF ₃	J-30	5-Br	G-2	5-CF ₃	CH ₃	H	H
Q-37	H	J-30	5-NO ₂	G-2	5-CF ₃	CH ₃	H	H
Q-37	3-F	J-7	4-CF ₃	G-3	6-Cl	H	H	CH ₃
Q-37	3-CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-5	6-Cl	H	H	CH ₃
Q-37	H	J-27	5-CN	G-2	5-CF ₃	H	H	CH ₃
Q-37	3-F	J-27	5-CF ₃	G-2	5-CF ₃	H	H	CH ₃
Q-37	3-CF ₃	J-27	5-NO ₂	G-3	6-Cl	H	H	CH ₃
Q-37	H	J-30	5-Br	G-5	6-Cl	H	H	CH ₃
Q-37	3-F	J-30	5-NO ₂	G-2	5-CF ₃	H	H	CH ₃
Q-37	3-CF ₃	J-7	4-CF ₃	G-2	5-CF ₃	H	H	COOCH ₃
Q-37	H	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-3	6-Cl	H	H	COOCH ₃
Q-37	3-F	J-27	5-CN	G-5	6-Cl	H	H	COOCH ₃
Q-37	3-CF ₃	J-27	5-CF ₃	G-2	5-CF ₃	H	H	COOCH ₃
Q-37	H	J-27	5-NO ₂	G-2	5-CF ₃	H	H	COOCH ₃
Q-37	3-F	J-30	5-Br	G-3	6-Cl	H	H	COOCH ₃
Q-37	3-CF ₃	J-30	5-NO ₂	G-5	6-Cl	H	H	COOCH ₃

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Q	X _k	J	Y _m	G	Z _n	R ¹	R ²	R ³
Q-37	H	J-7	4-CF ₃	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-37	3-F	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-37	3-CF ₃	J-27	5-CN	G-3	6-Cl	CH ₃	H	CH ₃
Q-37	H	J-27	5-CF ₃	G-5	6-Cl	CH ₃	H	CH ₃
Q-37	3-F	J-27	5-NO ₂	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-37	3-CF ₃	J-30	5-Br	G-2	5-CF ₃	CH ₃	H	CH ₃
Q-37	H	J-30	5-NO ₂	G-3	6-Cl	CH ₃	H	CH ₃
Q-37	3-F	J-7	4-CF ₃	G-5	6-Cl	CH ₃	H	COOCH ₃
Q-37	3-CF ₃	J-7	4-CH ₃ , 5-COOC ₂ H ₅	G-2	5-CF ₃	CH ₃	H	COOCH ₃
Q-37	H	J-27	5-CN	G-2	5-CF ₃	CH ₃	H	COOCH ₃
Q-37	3-F	J-27	5-CF ₃	G-3	6-Cl	CH ₃	H	COOCH ₃
Q-37	3-CF ₃	J-27	5-NO ₂	G-5	6-Cl	CH ₃	H	COOCH ₃
Q-37	H	J-30	5-Br	G-2	5-CF ₃	CH ₃	H	COOCH ₃
Q-37	3-F	J-30	5-NO ₂	G-2	5-CF ₃	CH ₃	H	COOCH ₃

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In the present invention, the pesticide means, in particular, an agent for controlling insect pests.

The compound of the present invention exhibits pesticidal effects against various insect pests at an extremely low dose. The insect pests include, for example, agricultural insect pests such as green rice leafhopper (Nephotettix cincticeps), brown rice planthopper (Nilaparvata lugens), green peach aphid (Myzus persicae), 28-spotted ladybird (Epilachna vigintioctopunctata), tobacco budworm (Heliothis virescens), european corn borer (Ostrinia nubilalis), fall armyworm (Spodoptera frugiperda), corn earworm (Helicoverpa zea), cabbage armyworm (Mamestra brassicae), common cutworm (Spodoptera litura), common white (Pieris rapae crucivora), cabbage sawfly (Athalia rosae ruficornis), smaller tea tortrix (Adoxophyes sp.), oriental tea tortrix (Homona magnanima), rice leafroller (Cnaphalocrocis medinalis), diamondback moth (Plutella xylostella), southern corn rootworm (Diabrotica undecimpunctata howardi), northern corn rootworm (D. longicornis barberi), western corn rootworm (D. virgifera virgifera), Colorado potato beetle (Leptinotarsa decemlineata); sanitary insect pests such as common gnat (Culex pipiens pallens), housefly, German cockroach (Blattella germanica), ants, fleas and louses; stored grain insect pests such as maize weevil (Sitophilus zeamais), red flour beetle (Tribolium castaneum) and

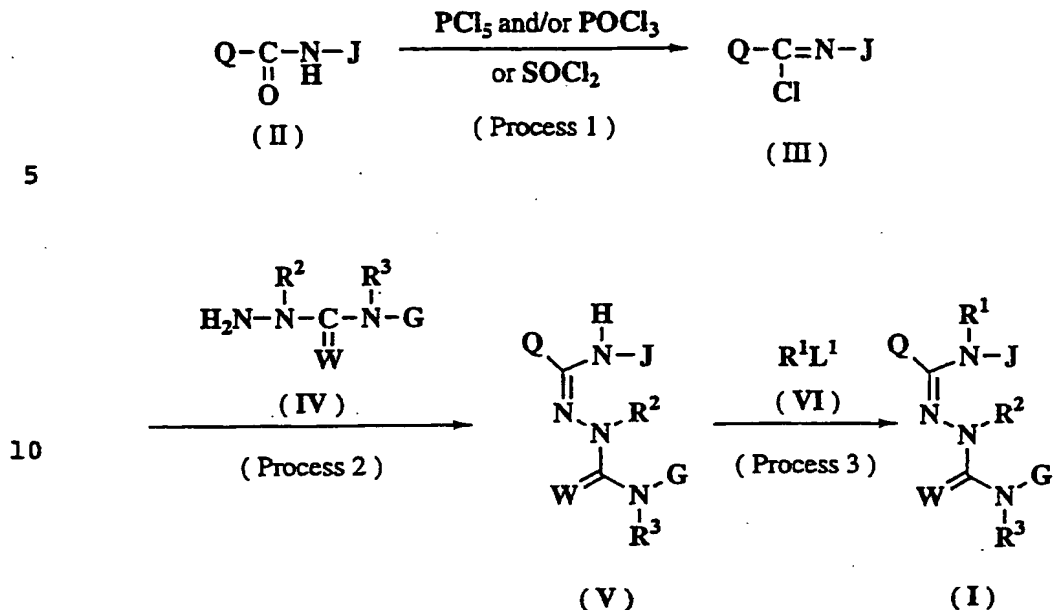
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almond moth (Cadra cautella); house pests such as
Formosan subterranean termite (Coptotermes formosanus);
animal pests such as mites, fleas and louses; indoor dust
mites such as acarid mites (Acaridae), Dermatophagoides
5 farinae, and Chenyletus malaccensis; and mollusks such as
slugs (Philomycidae) and snails. Namely, the compound of
the present invention is capable of effectively
controlling pests such as orthoptera, hemiptera,
lepidoptera, coleoptera, hymenoptera, diptera, isoptera
10 and acarina at a low dose. On the other hand, the
compound of the present invention has been found to be an
extremely useful compound which is substantially free
from adverse effects against mammals, fishes, Crustacea
and beneficial insects. On the basis of this discovery,
15 the present invention has been accomplished.

Now, methods for preparing the compounds of the
present invention will be described. The compounds of
the present invention are novel semicarbazone
derivatives, and representative methods for their
20 production will be described specifically.

In the respective methods, Q, J, G, W, X, Y, Z, R¹,
R², and R³ are as defined above, and each of L¹, L², L³
and L⁴ is an excellent leaving group such as a chlorine
atom, a bromine atom, an iodine atom, an alkylsulfonate
25 group or an arylsulfonate group.

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Method AProcess 1

15 A compound of the formula (III) can be obtained by reacting a compound of the formula (II) with e.g. phosphorus pentachloride, a mixture of phosphorus pentachloride and phosphorus oxychloride, or phosphorus oxychloride in an inert solvent or without any solvent,

20 or by reacting a compound of the formula (II) with thionyl chloride in an inert solvent or without any solvent. In the case of the reaction with thionyl chloride, the reaction proceeds more efficiently if from 0.001 to 0.1 equivalents of dimethylformamide is added.

Process 2

25 Then, the compound of the formula (III) and a compound of the formula (IV) are reacted in the presence

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or absence of a base in an inert solvent to obtain a compound of the formula (V) of the present invention (a compound of the formula (I) wherein R^1 is a hydrogen atom).

5 Process 3

Further, a compound of the formula (I) of the present invention can be obtained by reacting the compound of the formula (V) of the present invention and a compound of the formula (VI) in the presence or absence of a base in
10 an inert solvent.

The solvent to be used in Process 1 may, for example, be an aromatic hydrocarbon such as benzene or toluene, or a halogenated hydrocarbon such as carbon tetrachloride or 1,1,2-trichloroethane. It is preferred to employ from 1
15 to 3 equivalents of phosphorus pentachloride in toluene. The reaction temperature can be set at an optional level within a range of from 0°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 60°C to the
20 reflux temperature.

The base to be used in Process 2 may, for example, be an alkali metal alkoxide such as sodium ethoxide or potassium tert-butoxide, an alkali metal hydroxide such as sodium hydroxide or potassium hydroxide, an alkali
25 metal carbonate such as sodium carbonate, potassium carbonate or sodium hydrogen carbonate, an alkali metal hydride such as sodium hydride or potassium hydride, or

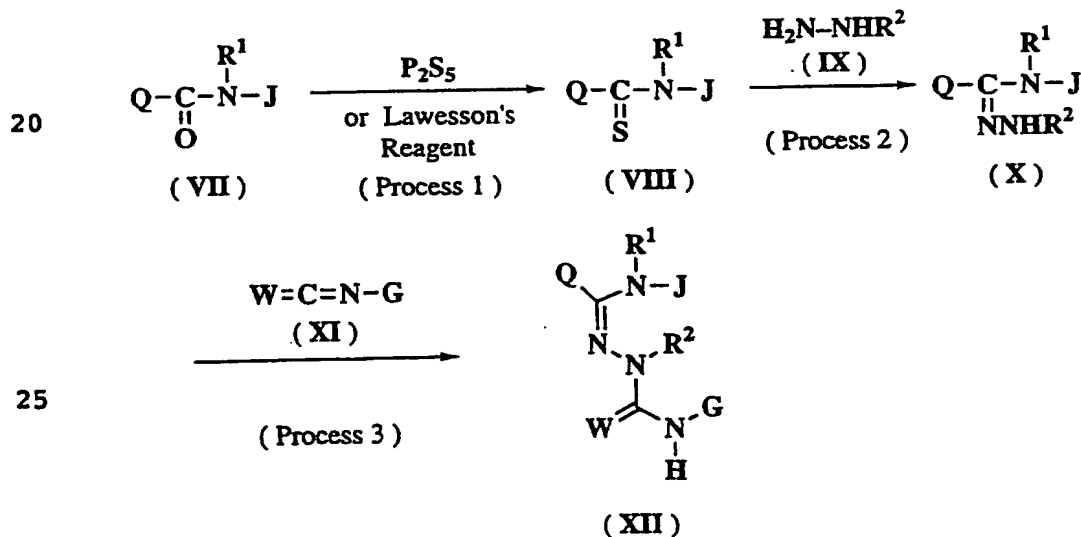
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an organic base such as triethylamine or pyridine. The solvent to be used may be any solvent so long as it does not hinder the reaction. For example, a lower alcohol such as methanol or ethanol, an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, dimethylsulfoxide, or water, may be mentioned. These inert solvents may be used alone or in combination as a mixture. Usually, it is preferred to use as the base, from 1 to 2 equivalents of an organic base such as triethylamine or pyridine and as a solvent an aromatic hydrocarbon such as benzene or toluene, or an ether such as tetrahydrofuran or diethyl ether. The reaction temperature may be set at an optional level within a range of from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction within a range of from 0°C to reflux temperature of the reaction mixture.

The base to be used in Process 3 may, for example, be the same as used in Process 2. The solvent to be used may be any solvent so long as it does not hinder the reaction. For example, it may be a lower alcohol such as methanol or ethanol, an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-

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dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a ketone such as acetone or methyl ethyl ketone, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, dimethylsulfoxide, or water. Such inert solvents may be used alone or in combination as a mixture. Usually, it is preferred to employ as the base from 1 to 3 equivalents sodium hydride, potassium hydride, potassium tert-butoxide, or potassium hydroxide in a polar solvent such as tetrahydrofuran or dimethylformamide. The reaction temperature can be set at an optional level within a range of from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 0°C to 90°C.

Method B

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Process 1

A compound of the formula (VIII) can be obtained by reacting a compound of the formula (VII) and diphosphorus pentasulfide in an inert solvent or without solvent, or
5 by reacting a compound of the formula (VII) with a Lawesson's reagent in an inert solvent or without solvent.

Process 2

Then, the compound of the formula (VIII) and the
10 compound of the formula (IX) are reacted in the presence or absence of a desulfurization accelerator in an inert solvent or without solvent, to obtain a compound of the formula (X).

Process 3

15 Further, the compound of the formula (X) and a compound of the formula (XI) are reacted in an inert solvent in the presence or absence of a base to obtain a compound of the formula (XII) (a compound of the formula (I) of the present invention wherein R^3 is a hydrogen
20 atom). The compound of the formula (X) can also be obtained by reacting the compound of the formula (IX) to the compound of the formula (III) obtained in Process 1 of Method A.

The solvent to be used in Process 1 may be any
25 solvent so long as it does not hinder the reaction. For example, it may be an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-

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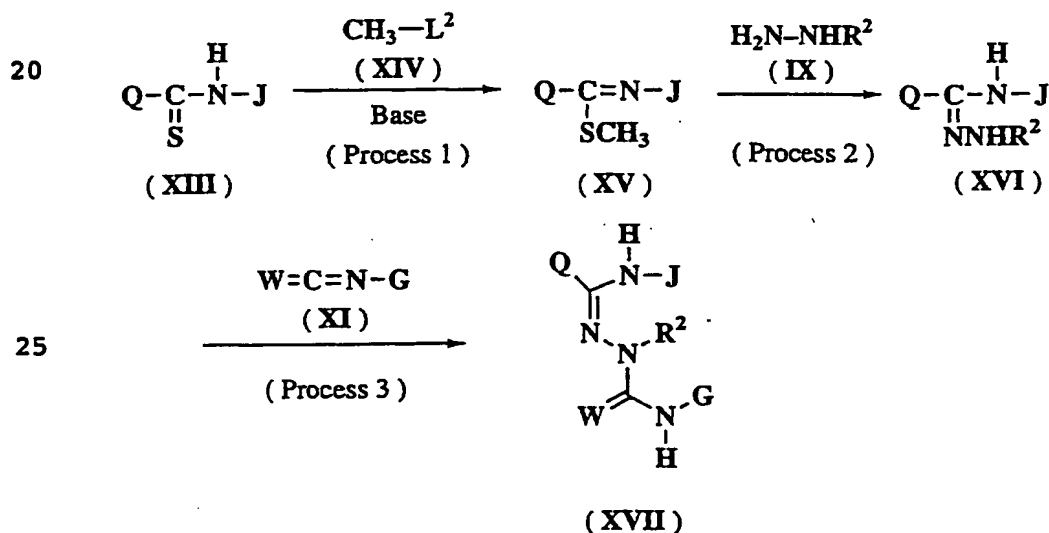
dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, pyridine, dimethylsulfoxide, or water. These inert solvents may be used alone or in combination as a mixture. Usually, it is preferred to employ from 0.5 to 1.5 mol times, based on the substrate, of diphosphorus sulfide in pyridine. The reaction temperature can be set at an optional level within a range of from 0°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 60°C to the reflux temperature.

The solvent to be used for Process 2, may be any solvent so long as it does not hinder the reaction. For example, a lower alcohol such as methanol or ethanol, an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, pyridine, dimethylsulfoxide or water, may be mentioned. These solvents may be used alone or in combination as a mixture of two or more of them.

As a suitable desulfurization accelerator, a copper salt such as copper chloride may, for example, be

The reaction temperature may be set at any optional level from 0°C to the reflux temperature of the reaction mixture. However, it is usually preferred to conduct the reaction, for example, at a temperature within a range of from 60°C to the reflux temperature in ethanol.

Method C



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Process 1

A compound of the formula (XV) can be obtained by reacting a compound of the formula (XIII) (an intermediate of the formula (VIII) as described in Method B wherein R^1 is a hydrogen atom) with a compound of the formula (XIV) in a solvent inert to the reaction, if necessary in the presence of a suitable base.

Process 2

Then, the compound of the formula (XV) and a compound of the formula (IX) are reacted in a solvent inert to the reaction or without any solvent, if necessary in the presence of a suitable base to obtain a compound of the formula (XVI) (an intermediate of the formula (X) as described in Method B wherein R^1 is a hydrogen atom).

Process 3

Further, the compound of the formula (XVI) and a compound of the formula (XI) are reacted in a solvent inert to the reaction, if necessary in the presence of a suitable base, to obtain a compound of the formula (XVII) (a compound of the formula (I) of the present invention wherein $R^1=R^3=H$).

The base to be used in Process 1 may be the same as used in Process 2 in Method A.

The solvent to be used, may be the same as used in Process 3 in Method A.

Usually, it is preferred to employ as a base, for example, from 1 to 3 equivalents, based on the substrate,

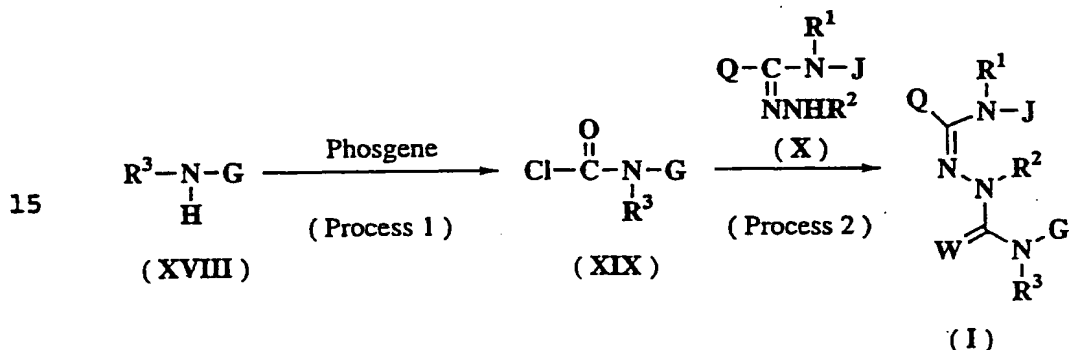
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of sodium hydride, potassium hydride, potassium tert-butoxide, potassium carbonate or potassium hydroxide in a polar solvent such as tetrahydrofuran, dimethylformamide, acetonitrile or acetone.

5 The reaction temperature may be set at any optional level from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction within a range of from 0°C to 90°C .

Processes 2 and 3 can be carried out in the same
10 manner as in Method B.

Method D



Process 1

20 A compound of the formula (XIX) can be obtained by reacting a compound of the formula (XVIII) with phosgene or a phosgene equivalent (phosgen dimer or triphosgene), if necessary in the presence of a suitable base.

Process 2

25 Then, the compound of the formula (XIX) and a compound of the formula (X) are reacted in a solvent inert to the reaction, if necessary in the presence of a

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suitable base, to obtain a compound of the formula (I) of the present invention wherein $R^3 \neq H$.

The base to be used in Process 1, may be the same as used in Process 2 in Method A.

5 The solvent to be used may be any solvent so long as it does not hinder the reaction. For example, an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-dimethoxyethane, ethylene glycol dimethyl ether, tetrahydrofuran or 1,4-dioxane, an
10 ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, or pyridine, may be mentioned. These solvents may be used alone or in combination as a mixture
15 of two or more of them.

Usually, it is preferred to react the compound with phosgene in e.g. a solvent mixture of dichloromethane/ethylene glycol dimethyl ether in the presence of from 1 to 3 equivalents, based on the
20 substrate, of sodium hydride. The reaction temperature may be set at an optional level from 0°C to the reflux temperature of the reaction mixture. However, it is preferred to carry out the reaction within a range of from 0°C to 25°C.

25 The base to be used in Process 2, may be the same as used in Process 2 in Method A.

The solvent to be employed, may be the same as used

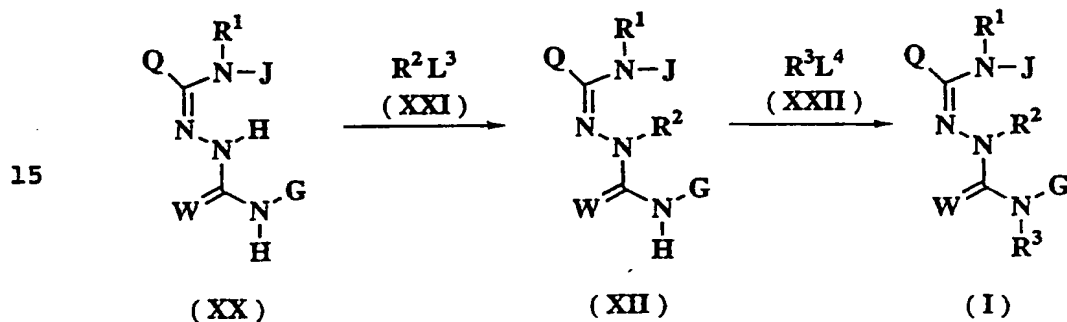
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in Process 1 of this method.

Usually, it is preferred to carry out the reaction in a solvent such as dichloromethane or tetrahydrofuran using as the base from 1 to 3 equivalents, based on the substrate, of an organic base such as triethylamine or pyridine.

The reaction temperature may be set at any optional level from 0°C to the reflux temperature of the reaction mixture. However, it is preferred to carry out the reaction within a range of from 0 to 25°C.

Method E

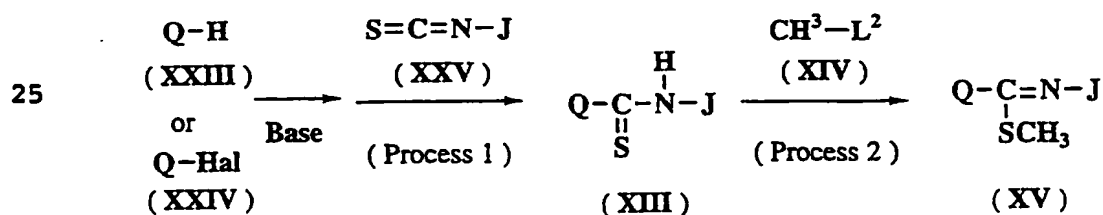


This method is a method of introducing R² and R³ into a compound of the formula (XX) of the present invention wherein R³ = R⁴ = hydrogen atom. A compound of the formula (XII) of the present invention can be obtained by reacting a compound of the formula (XX) of the present invention and a compound of the formula (XXI) in the presence of a base in an inert solvent. Then, the compound of the formula (XII) of the present invention and a compound of the formula (XXII) are reacted in the

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presence of a base in an inert solvent to obtain a compound of the formula (I) of the present invention. The base to be used in this reaction may, for example, be the same as used in Process 2 in Method A. The solvent to be used may be any solvent so long as it does not hinder the reaction. For example, it may be the same as in Process 3 in Method A. Usually, it is preferred to employ as the base from 1 to 3 equivalents of sodium hydride, potassium hydride, potassium tert-butoxide or potassium hydroxide in a polar solvent such as tetrahydrofuran or dimethylformamide. The reaction temperature can be set at an optional level within a range of from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 0°C to 90°C. In this reaction, in the case where $R^2=R^3$, a compound of the formula (I) of the present invention can be obtained without isolating the compound of the formula (XII) by using two equivalents of the compound of the formula (XXI) and two equivalents of a base.

Preparation of starting materials and intermediates in Methods A to E



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As another method for producing the intermediate of the formula (XIII) or (XV), a compound of the formula (XXIII) or (XXIV) is treated with from 1 to 2 equivalents of a reactant such as n-butyl lithium or lithium diisopropylamide in a solvent inert to the reaction and then reacted with a compound of the formula (XXV) to obtain a compound of the formula (XIII). The obtained compound of the formula (XIII) is reacted with a compound of the formula (XIV) in the same manner as in Process 1 in Method C to obtain a compound of the formula (XV).

Further, the compound of the formula (XV) can be prepared from the compound of the formula (XXIII) or (XXIV) by one pot by adding the compound of the formula (XIV) to the reaction mixture without isolating the compound of the formula (XIII).

The suitable solvent to be used for this reaction, may, for example, be an ether such as diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran or 1,4-dioxane, or a phosphoric amide such as hexamethylphosphoric triamide. These solvents may be used alone or in combination as a mixture of two or more of them.

The reaction temperature can be set at an optional level from -78°C to the reflux temperature of the reaction mixture. However, it is preferred to carry out the reaction within a range of from -78°C to 25°C.

On the other hand, in this method, the compound of the formula (XXIII) wherein Q is Q-5, Q-14, Q-18 or Q-22,

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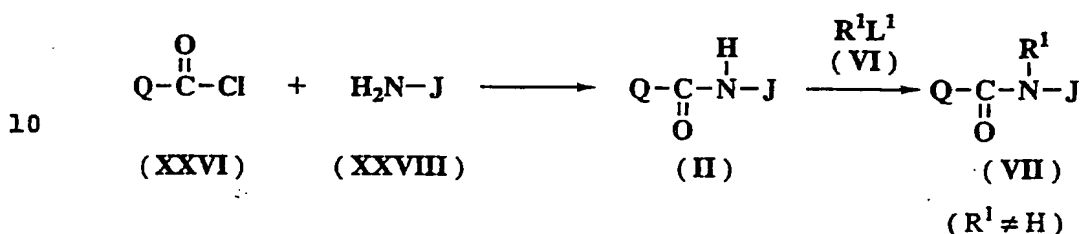
may be reacted with a compound of the formula (XXV) in a solvent inert to the reaction, if necessary in the presence of a suitable base, to obtain a compound of the formula (XIII) wherein Q is Q-5, Q-14, Q-18 or Q-22.

5 The base to be used for this reaction, may be the same as used in Process 2 in Method A.

 The solvent to be used, may be the same as used in Process 3 in Method A.

 Usually it is preferred to carry out the reaction in
10 a solvent such as tetrahydrofuran or dichloromethane without using any base, or to carry out the reaction by firstly preparing an alkali metal salt by using as a base from 0.01 to 2 equivalents, based on the substrate, of an organic base such as triethylamine, or from 1 to 2
15 equivalents, based on the substrate, of sodium hydride or the like.

 The reaction temperature may be set at an optional level from -20°C to the reflux temperature of the reaction mixture. However, it is preferred to carry out
20 the reaction within a range of from 0 to 25°C. The compound of the formula (XV) wherein Q is Q-5, Q-14, Q-18 or Q-22, can be obtained by reacting the obtained compound of the formula (XIII) with a compound of the formula (XIV) in the same manner as in Process 1 in
25 Method C. Further, in a case where this reaction is carried out by firstly preparing an alkali metal salt by means of e.g. sodium hydride, it is possible to produce

$$5 \quad \begin{array}{ccccc} \text{O} & & & & \text{R}^1 \\ \parallel & & & & | \\ \text{Q}-\text{C}-\text{Cl} & + & \text{R}^i-\text{N}-\text{J} & \longrightarrow & \text{Q}-\text{C}-\text{N}-\text{J} \\ & & | & & \parallel \\ & & \text{H} & & \text{O} \\ \text{(XXVI)} & & \text{(XXVII)} & & \text{(VII)} \end{array}$$


The compound of the formula (VII) to be used as a starting material in Method B, can be obtained by reacting a compound of the formula (XXVI) and a compound of the formula (XXVII) in the presence of a base in a solvent inert to the reaction.

The base to be used for this reaction, may, for example, be an alkali metal carbonate such as sodium carbonate, potassium carbonate or sodium hydrogencarbonate, an alkali metal hydride such as sodium hydride or potassium hydride, or an organic base such as triethylamine or pyridine.

The solvent to be used, may be any solvent so long as
25 it does not hinder the reaction. For example, an
aromatic hydrocarbon such as benzene or toluene, an ether
such as diethyl ether, 1,2-dimethoxyethane,

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tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane or 1,2-dichloroethane, an amide such as dimethylformamide, dimethylacetamide, acetone,
5 acetonitrile, or water, may be mentioned. These solvents may be used alone or in combination as a mixture of two or more of them.

Usually, it is preferred to employ as the base from 1 to 3 equivalents, based on the substrate, of an organic
10 base such as triethylamine or pyridine in a solvent such as tetrahydrofuran, ethyl acetate, dichloromethane or benzene. The reaction temperature may be set at any optional level from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to carry
15 out the reaction within a range of from 0 to 120°C.

Further, the compound of the formula (VII) wherein $R^1 \neq H$, can be produced also by reacting a compound of the formula (II) which can be produced by reacting the compound of the formula (XXVI) and the compound of the
20 formula (XXVIII) in the same manner, with a compound of the formula (VI), if necessary in the presence of a base in a solvent inert to the reaction.

The base to be used here, may be the same as used in Process 2 in Method A.

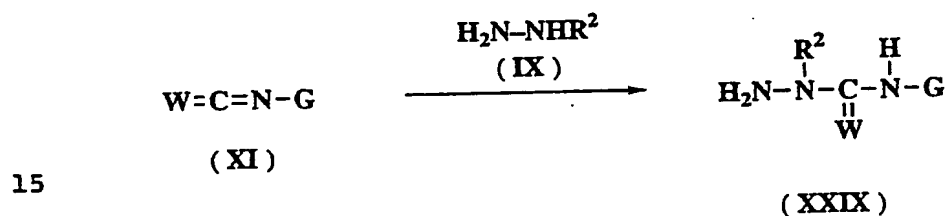
25 The solvent to be used, may be the same as used in Process 3 in Method A.

Usually, it is preferred to use as the base from 1 to

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3 equivalents, based on the substrate, of sodium hydride, potassium hydride, potassium tert-butoxide or potassium hydroxide in a polar solvent such as tetrahydrofuran or dimethylformamide, or to use as the base from 1 to 3
 5 equivalents, based on the substrate, of potassium carbonate in a polar solvent such as dimethylformamide, acetonitrile or acetone.

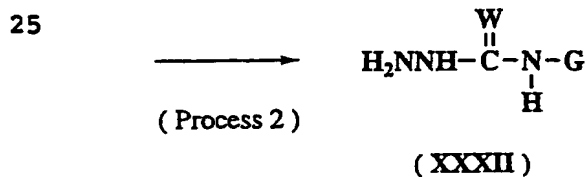
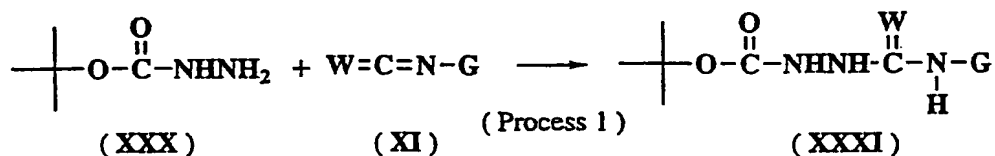
The reaction temperature may be set at an optional level of from -60°C to the reflux temperature of the
 10 reaction mixture. However, it is preferred to carry out the reaction within a range of from 0 to 90°C.



A compound of the formula (XXIX) (an intermediate of the formula (IV) in Method A wherein $\text{R}^3=\text{H}$) can be obtained by reacting a compound of the formula (XI) and a
 20 compound of the formula (IX) in the presence or absence of a catalyst in an inert solvent. The catalyst to be used in this reaction may, for example, be an organic base such as triethylenediamine or diazabicycloundecene. The amount of the catalyst to be used can be set at an
 25 optional level within a range of from 0.001 wt% to 10 wt%, relative to the compound of the formula (XI). However, an amount of from 0.1wt% to 1 wt% is preferred.

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The solvent may be any solvent so long as it does not hinder the reaction. For example, it may be an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane, chloroform or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, dimethylsulfoxide, or water. These inert solvents may be used alone or in combination as a mixture. The reaction temperature can be set at an optional level within a range of from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 0°C to 50°C. In this reaction, the molar ratio of the reactants is not particularly limited. However, in order to obtain the compound of the formula (XXIX) in good yield, it is preferred to employ the compound of the formula (IX) in a slightly excess amount relative to the compound of the formula (XI).



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A compound of the formula (XXXI) can be obtained by reacting a compound of the formula (XXX) and a compound of the formula (XI) in the presence or absence of a catalyst in an inert solvent. The catalyst, the solvent and the reaction conditions such as the temperature to be used in this reaction may be similar to those in synthesis of the compound of the formula (XXIX). It is a feature of this method that the compound of the formula (XXXI) can be obtained in good yield by using equimolar amounts of the compound of the formula (XXX) and the compound of the formula (XI). In Process 2, the compound of the formula (XXXI) is reacted in the presence of an acid in an inert solvent to obtain a compound of the formula (XXXII) (an intermediate of the formula (IV) in Method A wherein $R^2=R^3=H$). The acid to be used may, for example, be an inorganic acid such as hydrochloric acid or sulfuric acid, or an organic acid such as paratoluenesulfonic acid or trifluoroacetic acid. The solvent may be any solvent so long as it does not hinder the reaction. For example, it may be a lower alcohol such as methanol or ethanol, an aromatic hydrocarbon such as benzene or toluene, an ether such as diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran or 1,4-dioxane, an ester such as ethyl acetate, a halogenated hydrocarbon such as dichloromethane, carbon tetrachloride or 1,2-dichloroethane, an amide such as dimethylformamide or dimethylacetamide, acetonitrile, dimethylsulfoxide,

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acetic acid, or water. These inert solvents may be used alone or in combination as a mixture. Usually, it is preferred to employ from 1 to 50 equivalents of hydrochloric acid in a lower alcohol such as methanol or ethanol. The reaction temperature can be set at an optional level within a range of from -60°C to the reflux temperature of the reaction mixture. However, it is preferred to conduct the reaction at a temperature of from 0°C to the reflux temperature of the reaction mixture.

In the respective methods, the molar ratios of the respective reactants are not particularly limited. However, it is advantageous to conduct the reactions in equimolar or close to equimolar amounts.

When it is necessary to purify the compound of the present invention, the compound can be separated and purified by an optional purification method such as recrystallization, column chromatography or thin layer chromatography.

When the compound of the present invention is to be used as a pesticide, it is usually applied as admixed with a suitable carrier, for example, a solid carrier such as clay, pulp, bentonite, diatomaceous earth or fine silica powder, or a liquid carrier such as water, an alcohol (such as isopropanol, butanol, benzyl alcohol or furfuryl alcohol), an aromatic hydrocarbon (such as toluene or xylene), an ether (such as anisol), a ketone

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(such as cyclohexanone or isophorone), an ester (such as butyl acetate), an acid amide (such as N-methylpyrrolidone) or a halogenated hydrocarbon (such as chlorobenzene). If desired, a surfactant, an emulsifier, a dispersant, a penetrating agent, an extender, a thickener, an anti-freezing agent, an anti-solidification agent and/or a stabilizer may be added. It may be practically used in the form of an optional formulation such as a liquid formulation, an emulsifiable concentrate, a wettable powder, a dry flowable, a flowable, a dust or a granule.

Further, at the time of formulation or application, the compound of the present invention may be mixed with various other herbicides, insecticides, miticides, nematocides, fungicides, plant growth regulating agents, synergists, fertilizers or soil improving agents, as the case requires.

Particularly by mixing it with other agricultural chemicals or plant hormones, it can be expected to reduce the cost by a reduction of the dose in its application, to broaden the insecticidal spectrum due to synergistic effects of the mixed agents or to obtain higher pesticidal effects. In such a case, it is possible to combine it with a plurality of known agricultural chemicals. Compounds disclosed in 1994 Issue of Farm Chemicals Handbook may, for example, be mentioned as types of agricultural chemicals which can be used in

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admixture with the compound of the present invention.

The dose in application of the compound of the present invention varies depending upon the application site, the application season, the manner of application and the type of the crop plant. However, it is usually in an amount of from 0.005 to 50 kg/ha as the amount of active ingredient.

Now, Formulation Examples will be given in which compounds of the present invention are used. However, it should be understood that the present invention is by no means restricted to such specific Formulation Examples. In the following Formulation Examples, "parts" means "parts by weight".

Wettable powder

15	Compound of the present invention	5 to 80 parts
	Solid carrier	10 to 85 parts
	Surfactant	1 to 10 parts
	Others	1 to 5 parts

As "others" an antisolidification agent may, for example, be mentioned.

Emulsifiable concentrate

	Compound of the present invention	1 to 30 parts
	Liquid carrier	30 to 95 parts
	Surfactant	5 to 15 parts

25 Flowable

	Compound of the present invention	5 to 70 parts
	Liquid carrier	15 to 65 parts

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Surfactant	5 to 12 parts
Others	5 to 30 parts

As "others" an antifreezing agent and a thickener may, for example, be mentioned.

5 Dry flowable

Compound of the present invention	20 to 90 parts
Solid carrier	10 to 60 parts
Surfactant	1 to 20 parts

Granule

10	Compound of the present invention	0.1 to 10 parts
	Solid carrier	90 to 99.99 parts
	Others	1 to 5 parts

Dust

	Compound of the present invention	0.01 to 30 parts
15	Solid carrier	67 to 99.5 parts
	Others	0 to 3 parts

Now, the present invention will be described in further detail with reference to Examples (Preparation Examples, Formulation Examples and Test Examples).

20 PREPARATION EXAMPLES

The compounds of the present invention were prepared or can be prepared in accordance with the following Preparation Examples. However, it should be understood that the present invention is by no means restricted by such specific Preparation Examples.

25 PREPARATION EXAMPLE 1

N-(4-cyanophenyl)-2-thiophenecarboxamide 4-(4-

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trifluoromethoxyphenyl)semicarbazone (Compound No. 1-13
of the present invention)

Process 1: N-(4-cyanophenyl)-2-thiophenecarboxamide

25 ml of a benzene solution containing 8.04 g of 2-
5 thenoyl chloride was dropwise added to 75 ml of a benzene
solution containing 8.04 g of 4-aminobenzonitrile and
6.07 g of triethylamine at room temperature with
stirring. After completion of the dropwise addition,
stirring was further continued overnight at room
10 temperature. The solvent was distilled off under reduced
pressure, and then 300 ml of ethyl acetate was added.
The mixture was washed twice with water and dried over
anhydrous sodium sulfate. The solvent was distilled off
under reduced pressure, and the residue was
15 recrystallized from diisopropyl ether to obtain 12.32 g
of the desired compound.

Melting point: 205.0-206.0°C

¹HNMR(CDCl₃-DMSO-d₆, Me₄Si, 60MHz) δ 10.62(s, 1H, NH), 7.20-
8.21(m, 7H, Ar).

20 Process 2: N-(4-cyanophenyl)-2-thiophenecarboxamide 4-(4-
trifluoromethoxyphenyl)semicarbazone

1.14 g of N-(4-cyanophenyl)-2-thiophenecarboxamide
and 1.14 g of phosphorus pentachloride were added to 10
ml of toluene, and the mixture was stirred for 3 hours
25 under reflux under heating. The solvent and the formed
phosphorus oxychloride were distilled off under reduced
pressure, and the residue was dissolved in 10 ml of

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benzene. Then, 0.50 g of triethylamine and 1.18 g of 4-(4-trifluoromethoxyphenyl)semicarbazide were added thereto, and the mixture was stirred for 2 hours under reflux under heating. Then, 150 ml of ethyl acetate was added thereto, and the mixture was washed with water and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with diisopropyl ether to obtain 0.70 g of the desired compound.

10 Melting point: 185.0-186.0°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60 MHz) δ 9.67 (s, 1H, NH), 8.83 (s, 1H, NH), 8.77 (s, 1H, NH), 6.53-7.73 (m, 11H, Ar).

PREPARATION EXAMPLE 2

N-(4-cyanophenyl)-N-methyl-2-thiophenecarboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 1-45 of the present invention)

Process 1: N-(4-cyanophenyl)-N-methyl-2-thiophenecarboxamide

1.63 g of sodium hydride (purity: 55%) was suspended in 30 ml of dimethylformamide, and 50 ml of a dimethylformamide solution containing 7.80 g of N-(4-cyanophenyl)-2-thiophenecarboxamide prepared in Process 1 in Example 1, was dropwise added thereto with stirring under cooling with ice. After completion of the dropwise addition, stirring was continued for 30 minutes at room temperature. Then, 9.66 g of methyl iodide was added, and stirring was further continued overnight at room

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temperature. Then, the mixture was heated at 60°C for 30 minutes to complete the reaction. The solvent was distilled off under reduced pressure, and 200 ml of ethyl acetate was added to the residue. The mixture was washed
5 with water and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was triturated in the diisopropyl ether to obtain 6.47 g of the desired compound.

Melting point: 128.0-130.0°C

10 $^1\text{H NMR}(\text{CDCl}_3, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 7.71(\text{s}, 1\text{H}, \text{Ar}), 7.62(\text{s}, 1\text{H}, \text{Ar}), 6.85-7.84(\text{m}, 5\text{H}, \text{Ar}), 3.48(\text{s}, 3\text{H}, \text{CH}_3).$

Process 2: N-(4-cyanophenyl)-N-methyl-2-thiophenecarbothioamide

6.47 g of N-(4-cyanophenyl)-N-methyl-2-thiophenecarboxamide and 6.23 g of diphosphorus
15 pentasulfide were added to 30 ml of pyridine, and the mixture was stirred for 2 hours under reflux under heating and then added to 300 ml of ice water. The mixture was made alkaline by an addition of an aqueous
20 sodium hydroxide solution and then extracted with 200 ml of ethyl acetate. The organic layer was washed twice with dilute hydrochloric acid and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with
25 diisopropyl ether to obtain 6.00 g of the desired compound.

Melting point: 95.0-96.0°C.

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Process 3: N-(4-cyanophenyl)-N-methyl-2-
thiophenecarboxamide hydrazone

6.00 g of N-(4-cyanophenyl)-N-methyl-2-thiophenecarbothioamide and 4.67 g of hydrazine
5 monohydrate were added to 100 ml of ethanol, and the mixture was stirred for 2 hours under reflux under heating. The mixture was left to cool to room temperature, and then 100 ml of water was added thereto. Then, ethanol was distilled off under reduced pressure.
10 200 ml of ethyl acetate was added to the residue, and the mixture was washed with water and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was recrystallized from a solution of a mixture comprising diisopropyl ether,
15 hexane and ethyl acetate to obtain 4.00 g of the desired compound.

Melting point: 101.0-102.0°C

$^1\text{H NMR}(\text{CDCl}_3, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 6.72-7.52(\text{m}, 7\text{H}, \text{Ar}),$
 $5.57(\text{br}, 2\text{H}, \text{NH}_2), 3.25(\text{s}, 3\text{H}, \text{CH}_3).$

20 Process 4: N-4-(cyanophenyl)-N-methyl-2-
thiophenecarboxamide 4-(4-trifluoromethoxyphenyl)-
semicarbazone

0.26 g of N-(4-cyanophenyl)-N-methyl-2-thiophenecarboxamide hydrazone, 0.21 g of 4-
25 trifluoromethoxyphenyl isocyanate and two drops of triethylamine were added to 5 ml of dichloromethane, and the mixture was stirred overnight at room temperature.

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After completion of the reaction, 50 ml of ethyl acetate was added thereto, and the mixture was washed with water and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with diisopropyl ether to obtain 0.40 g of the desired compound.

Melting point: 196.0-198.0°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60MHz) δ 10.11 (s, 1H, NH), 8.78 (s, 1H, NH), 6.72-7.73 (m, 11H, Ar), 3.28 (s, 3H, CH_3).

10 PREPARATION EXAMPLE 3

N-4-(cyanophenyl)-4-methylthiazole-2-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 3-4 of the present invention)

15 Process 1: N-4-(cyanophenyl)-4-methylthiazole-2-thiocarboxamide

32 ml of n -BuLi (1.68N, hexane solution) was dropwise added to 50 ml of a THF solution containing 5.00 g of 4-methylthioazole with stirring at -78°C. After completion of the dropwise addition, stirring was continued for 30 minutes at -78°C, and then 50 ml of a THF solution containing 8.00 g of 4-cyanophenyl isothiocyanate was dropwise added thereto. The mixture was returned to room temperature, and then the stirring was further continued overnight. Then, 30 ml of 1N HCl was added to the reaction solution, and the mixture was extracted with 200 ml of ethyl acetate. The organic layer was washed with water and dried over anhydrous

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sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with diisopropyl ether to obtain 1.20 g of the desired compound.

5 Melting point: 159.0-161.0°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60 MHz) δ 11.00 (s, 1H, NH),
8.32 (d, $J=6.9$ Hz, 2H, Ar), 7.71 (d, $J=6.9$ Hz, 2H, Ar),
7.21 (s, 1H, thiazole), 2.42 (s, 3H, CH_3).

Process 2: N-4-(cyanophenyl)-4-methylthiazole-2-

10 carboxamide hydrazone

1.90 g of N-4-(cyanophenyl)-4-methylthiazole-2-thiocarboxamide and 0.64 g of potassium carbonate were added to 10 mL of acetonitrile, and 0.65 g of methyl iodide was dropwise added thereto at room temperature,
15 followed by stirring for 3 hours. Then, potassium carbonate was filtered off, and 50 mL of ethyl acetate was added to the filtrate. The mixture was washed with water and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to
20 obtain 1.10 g of methyl N-(4-cyanophenyl)-4-methylthiazole-2-thioimide.

0.80 g of hydrazine monohydrate was added to 30 mL of an ethanol solution containing 1.1 g of the obtained methyl N-(4-cyanophenyl)-4-methylthiazole-2-thioimide,
25 and the mixture was stirred at room temperature for 4 hours. Nitrogen gas was blown into the reaction solution for 10 minutes, and then 50 mL of ethyl acetate was added

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thereto. The mixture was washed with water and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was washed with diisopropyl ether to obtain 0.83 g of the desired compound.

Melting point: 151.0-152.0°C

Process 3: N-(4-cyanophenyl)-4-methylthiazole-2-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone

10 10 ml of a dichloromethane solution containing 0.41 g of 4-trifluoromethoxyphenyl isocyanate was dropwise added to 10 ml of a dichloromethane solution containing 0.51 g of N-(4-cyanophenyl)-4-methylthiazole-2-carboxamide hydrazone at room temperature, and stirring was further continued overnight at room temperature. The solvent was
15 distilled off under reduced pressure, and the residue was washed with diisopropyl ether to obtain 0.90 g of the desired compound.

Melting point: 148.0-150.0°C

¹HNMR(CDC₃-DMSO-d₆, Me₄Si, 60MHz) δ 9.67(s, 1H, NH),
20 9.15(s, 1H, NH), 9.03(s, 1H, NH), 7.80-6.62(m, 9H, Ar, thiazole),
2.37(s, 3H, CH₃).

PREPARATION EXAMPLE 4

N-(4-cyanophenyl)-2-chlorothiazole-4-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 3-5 of
25 the present invention)

Process 1: ethyl 2-aminothiazole-4-carboxylate

22.0 g of ethyl bromoacetate and 10.0 g of thiourea

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were added to 100 ml of ethanol, and the mixture was stirred for 5 hours under reflux under heating. The mixture was returned to room temperature, and precipitated solid was collected by filtration and
5 dissolved in an aqueous alkaline solution and extracted by an addition of 200 ml of ethyl acetate and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain 8.4 g of the desired compound as yellow oil.

10 $^1\text{H NMR}(\text{CDCl}_3\text{-DMSO-}d_6, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 7.33(\text{s}, 1\text{H}, \text{thiazole}),$
 $7.18(\text{s}, 2\text{H}, \text{NH}_2), 4.27(\text{q}, J=7.0\text{Hz}, 2\text{H}, \text{CH}_2),$
 $1.33(\text{t}, J=7.0\text{Hz}, 3\text{H}, \text{CH}_3).$

Process 2: ethyl 2-chlorothiazole-4-carboxylate

Ethyl 2-aminothiazole-4-carboxylate was added to a
15 mixture comprising 30 ml of concentrated hydrochloric acid and 10 ml of phosphoric acid, and the mixture was stirred under cooling with ice. Then, 10 ml of an aqueous solution containing 1.6 g of sodium nitrite was dropwise added thereto. After completion of the dropwise
20 addition, stirring was further continued for 4 hours at room temperature. The mixture was dropwise added to 50 ml of chloroform having 1.90 g of copper chloride suspended therein, at room temperature, and stirring was further continued for 2 hours. Insoluble substances were
25 removed by filtration, and the organic layer was dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain 2.70 g of the

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desired compound.

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60 MHz) δ 8.12 (s, 1H, thiazole), 4.39 (q, $J=7.0\text{Hz}$, 2H, CH_2), 1.37 (t, $J=7.0\text{Hz}$, 3H, CH_3).

Process 3: 2-chlorothiazole-4-carboxylic acid

5 10 ml of concentrated sulfuric acid and 50 ml of water were added to ethyl 2-chlorothiazole-4-carboxylate, and the mixture was heated and stirred at 80°C for 3 hours. The mixture was returned to room temperature and extracted with 100 ml of ethyl acetate and dried over
10 anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain 1.90 g of the desired compound.

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60 MHz) δ 12.66 (s, 1H, COOH), 8.25 (s, 1H, thiazole)

15 Process 4: N-(4-cyanophenyl)-2-chlorothiazole-4-carboxamide

2-chlorothiazole-4-carboxylic acid was converted to 2-chlorothiazole-4-carboxylic acid chloride by means of thionyl chloride. Then, 10 ml of a dichloromethane
20 solution thereof was dropwise added to 50 ml of a dichloromethane solution containing 0.71 g of 4-aminobenzonitrile and 0.61 g of triethylamine with stirring at room temperature. After completion of the dropwise addition, stirring was further continued
25 overnight at room temperature. The solvent was distilled off under reduced pressure, and then 100 ml of ethyl acetate was added thereto. The mixture was washed with

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water and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was washed with a 10:1 mixed solution of diisopropyl ether/isopropanol to obtain 1.00 g of the
5 desired compound.

Melting point: 156.0-158.0°C

¹H NMR(CDCℓ₃-DMSO-d₆, Me₄Si, 60MHz) δ 10.07(br, 1H, NH), 8.39-7.45(m, 4H, Ar), 8.27(s, 1H, thiazole)

Process 5: N-(4-cyanophenyl)-2-chlorothiazole-4-
10 carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone

1.00 g of N-(4-cyanophenyl)-2-chlorothiazole-4-carboxamide and 0.87 g of phosphorus pentachloride were added to 10 ml of toluene and stirred for 3 hours under reflux under heating. The solvent and the formed
15 phosphorus oxychloride were distilled off under reduced pressure, and the residue was dissolved in 10 ml of benzene. Then, 0.38 g of triethylamine and 0.89 g of 4-(4-trifluoromethoxyphenyl)semicarbazide were added thereto, and the mixture was stirred for 2 hours under
20 reflux under heating. 150 ml of ethyl acetate were added thereto, and the mixture was washed with water and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with a 10:1 mixed solution of diisopropyl
25 ether/diisopropanol to obtain 0.10 g of the desired compound.

Melting point: 190.0-192.0°C

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$^1\text{H NMR}(\text{CDCl}_3\text{-DMSO-}d_6, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 9.49(\text{s}, 1\text{H}, \text{NH}),$
 $8.90(\text{s}, 2\text{H}, \text{NH}), 8.08(\text{s}, 1\text{H}, \text{thiazole}), 7.81\text{-}6.60(\text{m}, 8\text{H}, \text{Ar}).$

PREPARATION EXAMPLE 5

N-(4-cyanophenyl)pyrrole-1-carboxamide 4-(4-

5 trifluoromethoxyphenyl)semicarbazone (Compound No. 3-1 of
the present invention)

Process 1: methyl N-(4-cyanophenyl)pyrrole-1-thioimide

1.1 g of sodium hydride (purity: 55%) was suspended
in 30 ml of tetrahydrofuran, and 5 ml of a
10 tetrahydrofuran solution containing 1.5 g of pyrrole was
dropwise added with stirring at room temperature. After
completion of the dropwise addition, the mixture was
stirred for one hour at room temperature. Then, 20 ml of
a tetrahydrofuran solution containing 3.2 g of
15 isothiocyanate was added thereto, followed by stirring
for 4 hours. Then, 4.7 g of methyl iodide was added to
this mixture, and the mixture was further stirred
overnight at room temperature. The reaction solution was
poured into water and extracted with 100 ml of ethyl
20 acetate. The extract was washed with a saturated sodium
chloride aqueous solution and dried over anhydrous sodium
sulfate. The solvent was distilled off under reduced
pressure, and the residue was washed with diisopropyl
ether to obtain 4.20 g of the desired product.
25 $^1\text{H NMR}(\text{CDCl}_3\text{-DMSO-}d_6, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 7.57(\text{d}, J=8.2\text{Hz}, 2\text{H}, \text{Ar}),$
 $7.26\text{-}7.06(\text{m}, 2\text{H}, \text{pyrrole}), 6.95(\text{d}, J=8.2\text{Hz}, 2\text{H}, \text{Ar}), 6.47\text{-}$
 $6.17(\text{m}, 2\text{H}, \text{pyrrole}), 2.27(\text{s}, 3\text{H}, \text{CH}_3).$

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Process 2: N-(4-cyanophenyl)pyrrole-1-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone

0.5 g of hydrazine monohydrate was added to 5 ml of an ethanol solution containing 0.48 g of methyl N-(4-cyanophenyl)pyrrole-1-thioimide, and the mixture was stirred for 1.5 hours at room temperature. Then, 5 ml of ethanol was further added thereto, and the mixture was stirred overnight. Then, 20 ml of ethyl acetate was added to the reaction mixture, and the mixture was washed with water and a saturated sodium chloride aqueous solution and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was dissolved in 5 ml of tetrahydrofuran, and 0.5 g of 4-trifluoromethylphenyl isocyanate was added thereto. The mixture was stirred for 4 hours at room temperature. Hexane was added thereto, and precipitated crystals were collected by filtration and washed with diisopropyl ether to obtain 0.77 g of the desired compound.

Melting point: 194.0-196.0°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60MHz) δ 8.82 (br, 2H, NH), 8.15 (br, 1H, NH), 7.62-7.11 (m, 6H, Ar), 7.08-6.88 (m, 2H, pyrrole), 6.87-6.40 (m, 2H, Ar), 6.28-6.11 (m, 2H, pyrrole).

PREPARATION EXAMPLE 6

N-(4-cyanophenyl)pyrazole-1-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 3-8 of

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the present invention)

Process 1: N-(4-cyanophenyl)pyrazole-1-thiocarboxamide

10 ml of a dichloromethane solution containing 2.1 g of pyrazole was dropwise added to 50 ml of a
5 dichloromethane solution containing 5 g of 4-cyanophenyl isothiocyanate, and the mixture was stirred overnight at room temperature. The solvent was distilled off under reduced pressure, and the residue was washed with diisopropyl ether and recrystallized from a solvent
10 mixture of hexane/ethyl acetate to obtain 5.2 g of the desired compound.

$^1\text{H NMR}(\text{CDCl}_3\text{-DMSO-}d_6, \text{Me}_4\text{Si}, 60\text{MHz}) \delta 11.00(\text{br}, 1\text{H}, \text{NH}),$
8.75(br, 1H, pyrazole), 8.16-7.48(m, 5H, Ar, pyrazole),
6.48(br, 1H, pyrazole).

15 Process 2: methyl N-(4-cyanophenyl-pyrazole-1-thioimide)

3.8 g of potassium carbonate was added to 30 ml of an acetonitrile solution of N-(4-cyanophenyl)pyrazole-1-thiocarboxamide, and the mixture was stirred for 30 minutes at room temperature. Then, 3.3 g of methyl
20 iodide was dropwise added thereto, and the mixture was stirred overnight. Then, potassium carbonate was filtered off, and 50 ml of ethyl acetate was added to the filtrate. The mixture was washed with water and a saturated sodium chloride aqueous solution and dried over
25 anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was washed with diisopropyl ether to obtain 5.0 g of the desired

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compound.

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60MHz) δ 7.84-

7.47(m, 4H, Ar, pyrazole), 7.00(d, $J=8.0\text{Hz}$, 2H, Ar),

6.39(m, 1H, pyrazole), 2.36(s, 3H, CH_3).

5 Process 3: 4-(4-cyanophenyl)pyrazole-1-carboxamide 4-(4-trifluoromethoxyphenyl)semicarbazone

4.1 g of hydrazine monohydrate was dropwise added to 30 ml of an ethanol solution containing 4.0 g of methyl N-(4-cyanophenyl)pyrazole-1-thioimide, and the mixture
10 was stirred for 2 hours at room temperature. 30 ml of water was added to the reaction solution, and the mixture was extracted with 100 ml of ethyl acetate. The organic layer was washed with a saturated sodium chloride aqueous solution and dried over anhydrous sodium sulfate. The
15 solvent was distilled off under reduced pressure to obtain 4.8 g of N-(4-cyanophenyl)pyrazole-1-carboxamide hydrazone as reddish brown oil.

0.8 g of 4-methoxyphenyl isocyanate was added to 5 ml of a tetrahydrofuran solution containing 0.75 g of the
20 obtained N-(4-cyanophenyl)pyrazole-1-carboxamide hydrazone at room temperature, and the mixture was stirred overnight. Precipitated solid was collected by filtration, and the residue was washed with diisopropyl ether and recrystallized from acetonitrile to obtain 0.50
25 g of the desired compound.

Melting point: 187.0-188.0°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60MHz) δ 9.27(s, 1H, NH),

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9.04(s,1H,NH), 8.52(s,1H,NH), 8.20(br,1H,pyrazole), 7.72-6.98(m,7H,Ar,pyrazole), 6.76-6.33(m,3H,Ar,pyrazole), 2.96(s,3H,CH₃).

PREPARATION EXAMPLE 7

5 N-(5-chloropyrimidin-2-yl)-3-fluorobenzamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 4-14 of the present invention)

Process 1: N-(5-chloropyrimidin-2-yl)-3-fluorobenzamide

6.08 g of 3-fluorobenzoyl chloride was dropwise added
10 to 40 ml of a pyridine solution containing 4.97 g of 2-amino-5-chloropyrimidine with stirring at room temperature. After completion of the dropwise addition, the mixture was further stirred for one hour under reflux under heating. The reaction mixture was added to 400 ml
15 of ice water, and precipitated solid was collected by filtration. The obtained crude product was dissolved in 400 ml of ethyl acetate and washed five times with 100 ml of dilute hydrochloric acid and further washed with 100 ml of a saturated sodium chloride aqueous solution, and
20 then it was dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was recrystallized from benzene to obtain 7.51 g of the desired compound.

Melting point: 149.1-150.3°C

25 ¹HNMR(CDCl₃-DMSO-d₆, Me₄Si, 60MHz) δ 11.20(s,1H,NH), 8.72(s,2H,Pyr.), 7.96-7.32(m,4H,Ar).

Process 2: N-(5-chloropyrimidin-2-yl)-3-fluorobenzamide

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4-(4-trifluoromethoxyphenyl)semicarbazone

0.63 g of N-(5-chloropyrimidin-2-yl)-3-fluorobenzamide and 0.57 g of phosphorus pentachloride were added to 5 ml of toluene, and the mixture was
5 stirred for 4 hours under reflux under heating. The solvent and formed phosphorus oxychloride were distilled off under reduced pressure, and the residue was dissolved in 10 ml of tetrahydrofuran. Then, 0.30 g of triethylamine and 0.59 g of 4-(4-
10 trifluoromethoxyphenyl)semicarbazide were added thereto, and the mixture was stirred overnight at room temperature. Then, 250 ml of ethyl acetate was added, and the mixture was washed twice with 50 ml of a saturated sodium chloride aqueous solution and then dried
15 over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with a mixed solution of diisopropyl ether/isopropanol to obtain 1.09 g of the desired compound.

Melting point: 201.2-202.0°C

20 ¹HNMR(DMSO-d₆, Me₄Si, 400MHz) δ 9.98(s, 1H, NH), 9.57(s, 1H, NH), 9.27(s, 1H, NH), 8.49(d, J=1.6Hz, 2H, Pyr.), 7.72(d, J=8.2Hz, 3H, Ar), 7.55(d, J=7.7Hz, 1H, Ar), 7.43(q, J=7.7Hz, 1H, Ar), 7.32(d, J=8.4Hz, 2H, Ar), 7.22(t, J=8.4Hz, 1H, Ar).

25 PREPARATION EXAMPLE 8

N-(5-nitropyridin-2-yl)-3-fluorobenzamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 4-13

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of the present invention)

Process 1: N-(5-nitropyridin-2-yl)-3-fluorobenzamide

7.93 g of 3-fluorobenzoyl chloride was dropwise added to 50 ml of a pyridine solution containing 6.96 g of 2-amino-5-nitropyridine with stirring at room temperature. After completion of the dropwise addition, the mixture was further stirred for 15 minutes under reflux under heating. The reaction mixture was added to 50 ml of ice water, and precipitated solid was collected by filtration. The obtained crude product was dissolved in 500 ml of ethyl acetate and washed five times with 100 ml of dilute hydrochloric acid and further washed with 100 ml of a saturated sodium chloride aqueous solution. It was then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure, and the residue was washed with diisopropyl ether to obtain 12.11 g of the desired compound.

Melting point: 172.9-174.2°C

$^1\text{H NMR}$ (CDCl_3 -DMSO- d_6 , Me_4Si , 60MHz) δ 11.34 (s, 1H, NH), 9.17 (t, $J=1.6\text{Hz}$, 1H, Py.), 8.49 (m, 2H, Py.) 7.80-7.31 (m, 4H, Ar).

process 2: N-(5-nitropyridin-2-yl)-3-fluorobenzamide 4-(4-trifluoromethoxyphenyl)semicarbazone

0.65 g of N-(5-nitropyridin-2-yl)-3-fluorobenzamide and 0.57 g of phosphorus pentachloride were added to 5 ml of toluene, and the mixture was stirred for 3 hours under reflux under heating. The solvent and formed phosphorus

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oxychloride were distilled off under reduced pressure, and the residue was dissolved in 10 ml of benzene. Then, 0.30 g of triethylamine and 0.59 g of 4-(4-trifluoromethoxyphenyl)semicarbazide were added thereto, and the mixture was stirred for one hour under reflux under heating. Then, 250 ml of ethyl acetate was added thereto, and the mixture was washed twice with 50 ml of a saturated sodium chloride aqueous solution and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue was washed with diisopropyl ether to obtain 0.97 g of the desired compound.

Melting point: 189.9-191.8°C

^1H NMR(DMSO- d_6 , Me $_4$ Si, 400MHz) δ 10.16(bs, NH), 9.74(bs, NH), 9.27(s, NH), 8.88(s, NH), 8.37(dq, J =9.2, 1.3Hz, 1H, Py.), 7.77-7.73(m, 3H, Ar), 7.52(d, J =7.7Hz, 1H, Ar), 7.43(q, J =7.0Hz, 1H, Ar), 7.32(d, J =8.6Hz, 2H, Ar), 7.25(q, J =7.1Hz, 2H, Ar), 6.84(d, J =9.3Hz, 1H, Py.).

PREPARATION EXAMPLE 9

N-(4-trifluoromethylthiazol-2-yl)-3-fluorobenzamide 4-(4-trifluoromethoxyphenyl)semicarbazone (Compound No. 4-6 of the present invention)

Process 1: N-(4-trifluoromethylthiazol-2-yl)-3-fluorobenzamide

4.76 g of 3-fluorobenzoyl chloride was dropwise added to 30 ml of a pyridine solution containing 5.04 g of 2-amino-4-trifluoromethylthiazole with stirring at room

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temperature. After completion of the dropwise addition, the mixture was further stirred for 15 minutes under reflux under heating. The reaction mixture was added to 300 ml of ice water, and precipitated solid was collected
5 by filtration. The obtained crude product was dissolved in 300 ml of ethyl acetate and washed five times with 100 ml of dilute hydrochloric acid and further washed with 100 ml of a saturated sodium chloride aqueous solution. Then, it was dried over anhydrous sodium sulfate. The
10 solvent was distilled off under reduced pressure, and the residue was washed with hexane to obtain 7.36 g of the desired compound.

Melting point: 95.9-98.9°C

¹H NMR (CDCl₃, Me₄Si, 60 MHz) δ 10.44 (s, 1H, NH), 7.74-
15 7.27 (m, 5H, Ar)

Process 2: N-(4-trifluoromethylthiazol-2-yl)-3-fluorobenzamide 4-(4-trifluoromethoxyphenyl)semicarbazone

0.73 g of N-(4-trifluoromethylthiazol-2-yl)-3-fluorobenzamide and 0.57 g of phosphorus pentachloride
20 were added to 5 ml of toluene, and the mixture was stirred for 2 hours under reflux under heating. The solvent and formed phosphorus oxychloride were distilled off under reduced pressure, and the residue was dissolved in 10 ml of benzene. Then, 0.30 g of triethylamine and
25 0.59 g of 4-(4-trifluoromethoxyphenyl)semicarbazide were added thereto, and the mixture was stirred overnight at room temperature. Then, 250 ml of ethyl acetate was

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added thereto, and the mixture was washed twice with 50 ml of a saturated sodium chloride aqueous solution and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The residue
5 was recrystallized from diisopropyl ether to obtain 0.22 g of the desired compound as a mixture of isomers A and B.

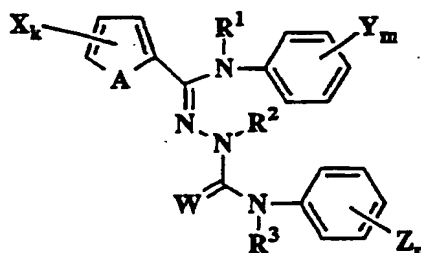
Melting point: 146.0-148.8°C

¹HNMR(DMSO-d₆, Me₄Si, 400MHz) isomer A: δ11.55(s, 1H, NH),
10 9.05(s, 1H, NH), 8.86(s, 1H, NH), 7.85-7.27(m, 9H, Ar), isomer
B: δ10.35(s, 1H, NH), 10.09(s, 1H, NH), 9.26(s, 1H, NH), 7.85-
7.27(m, 9H, Ar).

The compounds of the present invention can be synthesized in accordance with the above described
15 production methods and Examples. Specific examples of such compounds are shown in Tables 6 to 9. However, it should be understood that the present invention is by no means restricted to such specific Examples.

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Table 6



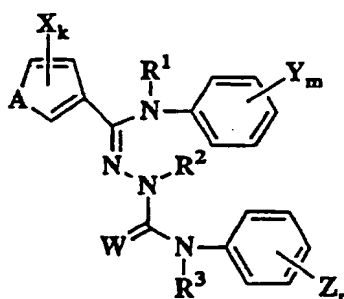
No.	A	R ¹	R ²	R ³	W	X _k	Y _m	Z _n	melting point (°C)
1-1	S	H	H	H	O	H	4-F	4-OCF ₃	166.8-168.6
1-2	S	H	H	H	O	H	4-Cl	4-OCF ₃	174.1-175.5
1-3	S	H	H	H	O	H	4-Br	4-OCF ₃	258.8-261.8
1-4	S	H	H	H	O	H	4-I	4-OCF ₃	264.6-267.6
1-5	S	H	H	H	O	H	4-CF ₃	4-Cl	176.3-177.5
1-6	S	H	H	H	O	H	4-CF ₃	4-OCF ₃	261.0-264.0
1-7	S	H	H	H	O	H	4-COOCH ₃	4-OCF ₃	177.8-179.9
1-8	S	H	H	H	O	H	4-CN	4-Cl	187.0-188.5
1-9	S	H	H	H	O	H	4-CN	4-CH(CH ₃) ₂	180.5-183.0
1-10	S	H	H	H	O	H	4-CN	4-CF ₃	200.0-201.5
1-11	S	H	H	H	O	H	4-CN	4-COOC ₂ H ₅	210.5-222.0
1-12	S	H	H	H	O	H	4-CN	4-OCH(CH ₃) ₂	182.0-184.0
1-13	S	H	H	H	O	H	4-CN	4-OCF ₃	185.0-186.0
1-14	S	H	H	H	O	H	4-OCF ₃	4-Cl	174.1-175.9
1-15	S	H	H	H	O	H	4-OCF ₃	4-OCF ₃	239.1-242.0
1-16	S	H	H	H	O	H	4-OC ₂ F ₅	4-OCF ₃	168.5-170.5
1-17	S	H	H	H	O	H	4-NO ₂	4-Cl	189.0-190.0
1-18	S	H	H	H	O	H	4-NO ₂	4-OCF ₃	193.0-196.0
1-19	S	H	H	H	O	4-Cl	4-CN	4-OCF ₃	197.0-200.0
1-20	S	H	H	H	O	4-Cl	4-NO ₂	4-OCF ₃	278.6-280.7
1-21	S	H	H	H	O	5-Cl	4-CN	4-OCF ₃	186.3-187.8
1-22	S	H	H	H	O	4-Br	4-Br	4-OCF ₃	201.0-203.0
1-23	S	H	H	H	O	4-Br	4-I	4-OCF ₃	264.1-271.3
1-24	S	H	H	H	O	4-Br	4-CF ₃	4-OCF ₃	192.0-193.0
1-25	S	H	H	H	O	4-Br	4-COOCH ₃	4-Cl	177.1-178.2

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No.	A	R ¹	R ²	R ³	W	X _k	Y _m	Z _n	melting point (°C)
1-26	S	H	H	H	O	4-Br	4-COOCH ₃	4-OCF ₃	239.4-244.1
1-27	S	H	H	H	O	4-Br	4-CN	H	184.0-186.0
1-28	S	H	H	H	O	4-Br	4-CN	4-F	186.0-190.0
1-29	S	H	H	H	O	4-Br	4-CN	4-Cl	190.0-192.0
1-30	S	H	H	H	O	4-Br	4-CN	4-I	204.5-206.0
1-31	S	H	H	H	O	4-Br	4-CN	4-CF ₃	204.0-205.5
1-32	S	H	H	H	O	4-Br	4-CN	4-COOC ₂ H ₅	190.5-192.0
1-33	S	H	H	H	O	4-Br	4-CN	4-OCH(CH ₃) ₂	196.5-198.0
1-34	S	H	H	H	O	4-Br	4-CN	4-OCF ₃	198.0-200.0
1-35	S	H	H	H	O	4-Br	4-CN	4-OC ₂ F ₅	201.0-203.0
1-36	S	H	H	H	O	4-Br	4-OCF ₃	4-Cl	174.2-176.0
1-37	S	H	H	H	O	4-Br	4-OCF ₃	4-OCF ₃	181.5-183.0
1-38	S	H	H	H	O	4-Br	4-NO ₂	4-CF ₃	205.8-207.2
1-39	S	H	H	H	O	4-Br	4-NO ₂	4-OCF ₃	256.0-259.0
1-40	S	H	H	H	O	5-Br	4-CN	4-OCF ₃	193.5-195.0
1-41	S	H	H	H	O	4,5-Br ₂	4-CN	4-OCF ₃	267.0-269.0
1-42	S	H	H	H	O	5-CH ₃	4-CN	4-OCF ₃	185.0-187.0
1-43	S	H	H	H	O	5-NO ₂	4-CN	4-OCF ₃	252.0-255.0
1-44	S	CH ₃	H	H	O	H	4-CN	4-Cl	243.5-245.0
1-45	S	CH ₃	H	H	O	H	4-CN	4-OCF ₃	196.0-198.0
1-46	S	CH ₃	H	H	S	H	4-CN	4-OCF ₃	177.5-179.0
1-47	S	CH ₃	H	H	O	4-Br	4-CN	4-OCF ₃	208.0-210.0
1-48	O	H	H	H	O	H	4-CF ₃	4-OCF ₃	172.0-174.0
1-49	O	H	H	H	O	H	4-CN	4-OCF ₃	185.0-186.0
1-50	O	H	H	H	O	5-Br	4-CN	4-OCF ₃	190.0-192.0

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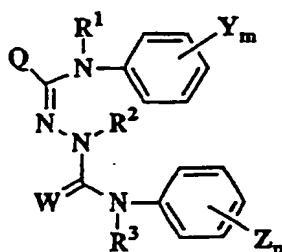
Table 7



No.	A	R ¹	R ²	R ³	W	X _k	Y _m	Z _n	melting point (°C)
2-1	S	H	H	H	O	H	4-CN	4-OCF ₃	189.0-191.0
2-2	S	H	H	H	O	H	4-CF ₃	4-OCF ₃	261.0-263.0
2-3	S	H	H	H	O	H	4-NO ₂	4-OCF ₃	256.0-257.0
2-4	S	H	H	H	O	H	4-COOCH ₃	4-OCF ₃	197.0-199.0
2-5	S	H	H	H	O	5-Cl	4-CN	4-OCF ₃	189.5-191.7
2-6	S	H	H	H	O	5-Cl	4-NO ₂	4-OCF ₃	187.5-189.3
2-7	S	H	H	H	O	5-Br	4-CN	4-OCF ₃	191.1-193.0
2-8	S	H	H	H	O	5-Br	4-CF ₃	4-OCF ₃	179.0-180.7
2-9	S	H	H	H	O	5-Br	4-NO ₂	4-OCF ₃	188.2-189.8
2-10	S	H	H	H	O	5-Br	4-COOCH ₃	4-OCF ₃	186.5-187.5
2-11	S	H	H	H	O	2,5-Br ₂	4-CN	4-OCF ₃	190.6-191.0

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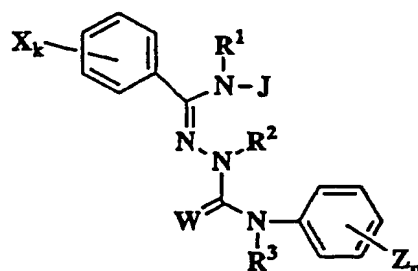
Table 8



No.	Q	R ¹	R ²	R ³	W	X _k	Y _m	Z _n	melting point (°C)
3-1	Q-5	H	H	H	O	H	4-CN	4-OCF ₃	194.0-196.0
3-2	Q-8	H	H	H	O	H	4-CN	4-OCF ₃	133.0-136.0
3-3	Q-8	H	H	H	O	H	4-CF ₃	4-OCF ₃	173.0-175.0
3-4	Q-8	H	H	H	O	4-CH ₃	4-CN	4-OCF ₃	148.0-150.0
3-5	Q-9	H	H	H	O	2-Cl	4-CN	4-OCF ₃	190.0-192.0
3-6	Q-10	H	H	H	O	2-Cl	4-CN	4-OCF ₃	204.5-204.6
3-7	Q-10	H	H	H	O	2-CH ₃ , 4-CF ₃	4-CN	4-OCF ₃	208.0-209.0
3-8	Q-14	H	H	H	O	H	4-CN	4-OCF ₃	187.0-188.0
3-9	Q-14	H	H	H	O	H	4-NO ₂	4-OCF ₃	184.0-185.5
3-10	Q-15	H	H	H	O	H (R ⁴ =CH ₃)	4-CN	4-OCF ₃	181.0-183.0
3-11	Q-16	H	H	H	O	H (R ⁴ =CH ₃)	4-CN	4-OCF ₃	175.5-177.0
3-12	Q-17	H	H	H	O	3-Cl (R ⁴ =CH ₃)	4-CN	4-OCF ₃	213.2-215.9
3-13	Q-22	H	H	H	O	H	4-CN	4-OCF ₃	162.5-163.5
3-14	Q-22	H	H	H	O	H	4-COOC ₂ H ₅	4-OCF ₃	178.5-180.0
3-15	Q-27	H	H	H	O	3-CH ₃	4-CN	4-OCF ₃	199.0-201.0
3-16	Q-31	H	H	H	O	6-Cl	4-CN	4-OCF ₃	198.7-200.0
3-17	Q-32	H	H	H	O	H	4-CF ₃	4-OCF ₃	168.0-170.0

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Table 9



No.	J	R ¹	R ²	R ³	W	X _k	Y _m	Z _n	melting point (°C)
4-1	J-1	H	H	H	O	3-F	5-CN	4-OCF ₃	193.9-196.2
4-2	J-2	H	H	H	O	3-F	5-CN	4-OCF ₃	169.7-172.0
4-3	J-7	H	H	H	O	3-F	5-Cl	4-OCF ₃	170.0-180.0
4-4	J-7	H	H	H	O	3-F	5-CH ₃	4-OCF ₃	162.5-164.1
4-5	J-7	H	H	H	O	3-F	4-C(CH ₃) ₃	4-OCF ₃	amorphous
4-6	J-7	H	H	H	O	3-F	4-CF ₃	4-OCF ₃	146.0-148.0
4-7	J-7	H	H	H	O	3-F	4-COOC ₂ H ₅	4-OCF ₃	132.2-135.0
4-8	J-7	H	H	H	O	3-F	4-CH ₃ , 5-COOC ₂ H ₅	4-OCF ₃	164.5-166.2
4-9	J-7	H	H	H	O	3-F	-CH=CH-CH=CH-	4-OCF ₃	167.1-170.0
4-10	J-13	H	H	H	O	3-F	^H (R ⁵ =CH ₃)	4-OCF ₃	160.5-161.5
4-11	J-27	H	H	H	O	3-F	5-Cl	4-OCF ₃	198.8-200.8
4-12	J-27	H	H	H	O	3-F	5-Br	4-OCF ₃	193.0-195.0
4-13	J-27	H	H	H	O	3-F	5-NO ₂	4-OCF ₃	189.9-191.8
4-14	J-30	H	H	H	O	3-F	5-Cl	4-OCF ₃	201.2-202.0
4-15	J-30	H	H	H	O	3-F	5-Br	4-OCF ₃	196.9-198.3

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FORMULATION EXAMPLES

Now, Formulation Examples will be given for pesticides containing compounds of the present invention as active ingredients. However, it should be understood
5 that the present invention is by no means restricted to such specific Examples. In the following Formulation Examples, "parts" means "parts by weight".

FORMULATION EXAMPLE 1: Wettable powder

	Compound of the present invention	50 parts
10	Zeeklite PFP (tradename for Kaoline-type clay, manufactured by Zeeklite Mining Industries Co., Ltd.)	43 parts
	Sorpol 5050 (tradename for anionic surfactant, manufactured by Toho Chemicals Ind. Co., Ltd.)	2 parts
	Lunox 1000C (tradename for anionic surfactant, manufactured by Toho Chemicals Ind. Co., Ltd.)	3 parts
15	Carplex #80 (antisolidification agent) (tradename for fine silica, manufactured by Shionogi & Co., Ltd.)	2 parts

The above components are uniformly mixed and triturated to obtain a wettable powder.

FORMULATION EXAMPLE 2: Emulsifiable concentrate

20	Compound of the present invention	3 parts
	Xylene	76 parts
	Isophorone	15 parts
	Sorpol 3005X (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by Toho Chemicals Ind. Co., Ltd.)	6 parts
25		

The above components are uniformly mixed to obtain an emulsifiable concentrate.

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FORMULATION EXAMPLE 3: Flowable

	Compound of the present invention	35 parts
	Agrisol S-711 (tradename for a nonionic surfactant, manufactured by Kao Corporation)	8 parts
5	Lunox 1000C (tradename for anionic surfactant, manufactured by Toho Chemicals Ind. Co., Ltd.)	0.5 part
	1% Rodopol water (tradename for a thickener, manufactured by Rhône-Poulenc)	20 parts
	Ethylene glycol (antifreezing agent)	8 parts
10	Water	28.5 parts

The above components are uniformly mixed to obtain a flowable.

FORMULATION EXAMPLE 4: Dry flowable

	Compound of the present invention	75 parts
15	Isoban No. 1 (tradename for an anion surfactant, manufactured by Kuraray Isoprene Chemical K.K.)	10 parts
	Anilex N (tradename for anionic surfactant, manufactured by Sanyo Kokusaku Pulp K.K.)	5 parts
20	Carplex #80 (tradename for fine silica, manufactured by Shionogi & Co., Ltd.)	10 parts

The above components are uniformly mixed and finely pulverized to obtain a dry flowable.

FORMULATION EXAMPLE 5: Granule

	Compound of the present invention	0.1 part
25	Bentonite	55.0 parts
	Talc	44.9 parts

The above components are uniformly mixed and

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trituated. Then, a small amount of water is added thereto. The mixture is stirred, kneaded and then granulated by an extrusion-type granulator, followed by drying to obtain a granule.

5 FORMULATION EXAMPLE 6: Dust

	Compound of the present invention	3.0 parts
	Carplex #80 (tradename for fine silica, manufactured by Shionogi & Co., Ltd.)	0.5 part
	Clay	95 parts
10	Diisopropyl phosphate	1.5 parts

The above components are uniformly mixed and trituated to obtain a dust.

In use, the above wettable powder, emulsifiable concentrate, flowable or dry flowable is diluted from 50 to 20,000 times with water and applied so that the active ingredient will be from 0.05 to 50 kg/ha.

TEST EXAMPLES

Now, usefulness of the compounds of the present invention as pesticides will be described in detail with reference to the following Test Examples.

TEST EXAMPLE 1: Insecticidal test on common cutworm (Spodoptera litura)

5% emulsifiable concentrates of the compounds of the present invention (25% wettable powders in the case of certain compounds) were diluted with water containing a spreader to prepare the samples of liquid insecticides with a concentration of 1,000 ppm. Leaves of cabbage

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were immersed in the respective samples of liquid insecticides for about 10 seconds. After air drying, the leaves were placed in the Petri dishes and the second instar nymphae of common cutworm (Spodoptera litura) were released in the said dishes (10 insects per dish). The dishes were closed with a perforated cover and kept in a 25°C thermostatic chamber. The percentage of mortality of the insects after the lapse of 6 days was calculated by the following formula. The tests were conducted twice for each compound.

$$\text{Mortality (\%)} = \frac{\text{number of insects killed}}{\text{number of insects released}} \times 100$$

In the test results, the following compounds of the present invention exhibited a mortality of 100%.

Compound Nos.: 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-10, 1-13, 1-14, 1-15, 1-16, 1-17, 1-18, 1-19, 1-20, 1-21, 1-22, 1-23, 1-24, 1-25, 1-26, 1-28, 1-29, 1-30, 1-31, 1-32, 1-34, 1-35, 1-36, 1-37, 1-38, 1-39, 1-40, 1-42, 1-45, 1-47, 1-48, 1-50, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 3-1, 3-2, 3-3, 3-4, 3-5, 3-8, 3-10, 3-15, 3-16, 3-17, 4-2, 4-4, 4-6, 4-8, 4-10, 4-14, 4-15.

TEST EXAMPLE 2: Insecticidal test on twenty eight-spotted ladybird (Epilachna vigintioctopunctata)

5% emulsifiable concentrates of the compounds of the present invention (25% wettable powders in the case of certain compounds) were diluted with water containing a

- 248 -

spreader to prepare the samples of liquid insecticides with a concentration of 1,000 ppm. Leaves of tomato were immersed in the respective samples of liquid insecticides for about 10 seconds. Then, after air drying the leaves, they were placed in the Petri dishes and the second instar nymphae of twenty eight-spotted ladybird (Epilachna vigintioctopunctata) were released in the respective dishes (10 insects per dish). After covered, the dishes were kept in a 25°C thermostatic chamber. The percentage of mortality after the lapse of 6 days was calculated by the following formula. The tests were conducted twice for each compound.

$$\text{Mortality (\%)} = \frac{\text{number of insects killed}}{\text{number of insects released}} \times 100$$

15

In the results, the following compounds of the present invention exhibited a mortality of 100%.

compounds Nos.: 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 1-17, 1-18, 1-19, 1-20, 1-21, 1-22, 1-23, 1-24, 1-25, 1-26, 1-28, 1-29, 1-30, 1-31, 1-32, 1-34, 1-35, 1-36, 1-37, 1-38, 1-39, 1-40, 1-42, 1-45, 1-46, 1-47, 1-48, 1-49, 1-50, 2-1, 2-2, 2-3, 2-5, 2-6, 2-7, 2-8, 2-9, 3-1, 3-3, 3-6, 3-8, 3-9, 3-13, 3-15, 3-16, 3-17, 4-3, 4-4, 4-5, 4-6, 4-7, 4-8, 4-10, 4-11, 4-13, 4-14, 4-15.

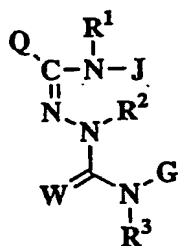
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CLAIMS:

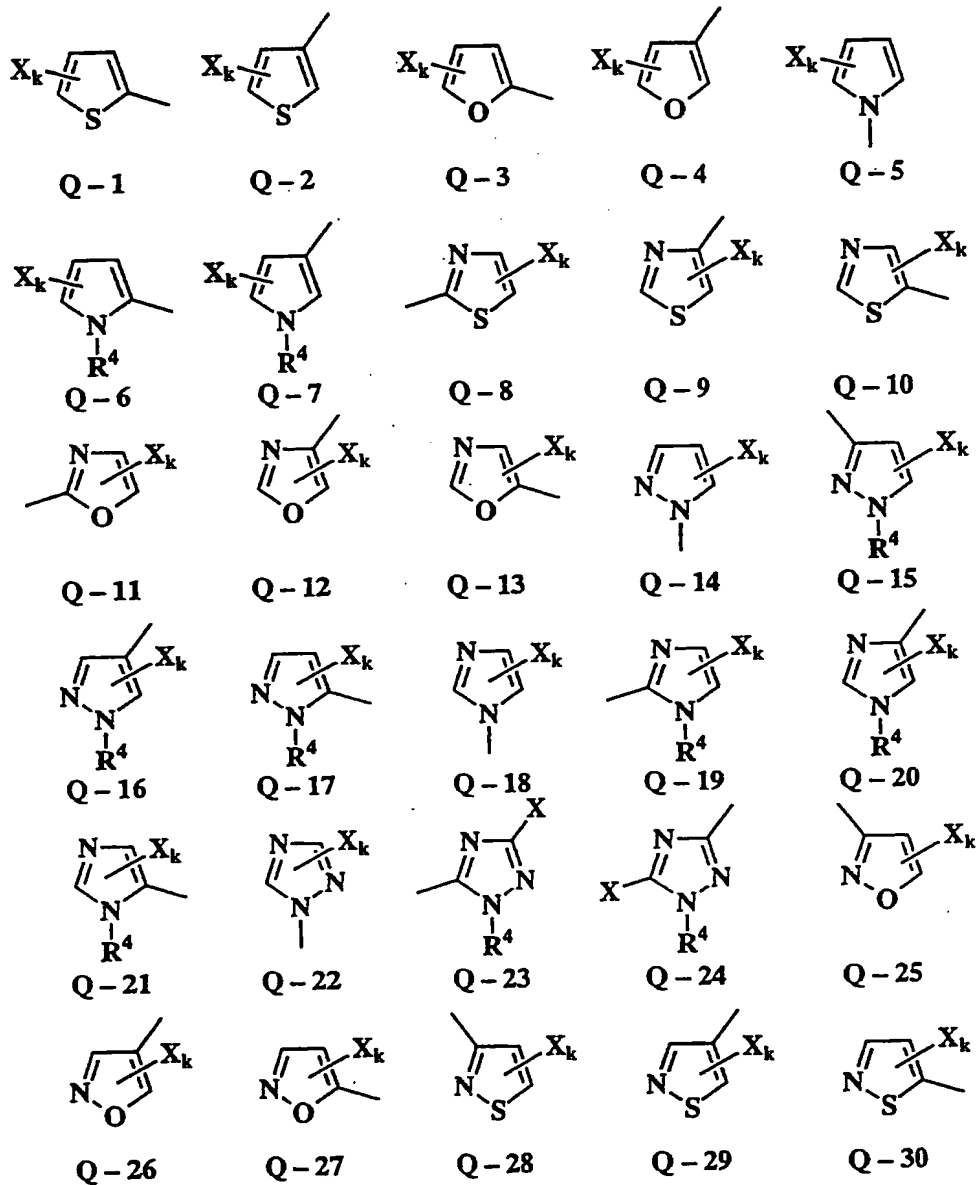
1. A semicarbazone derivative of the formula (I) or its salt:

5

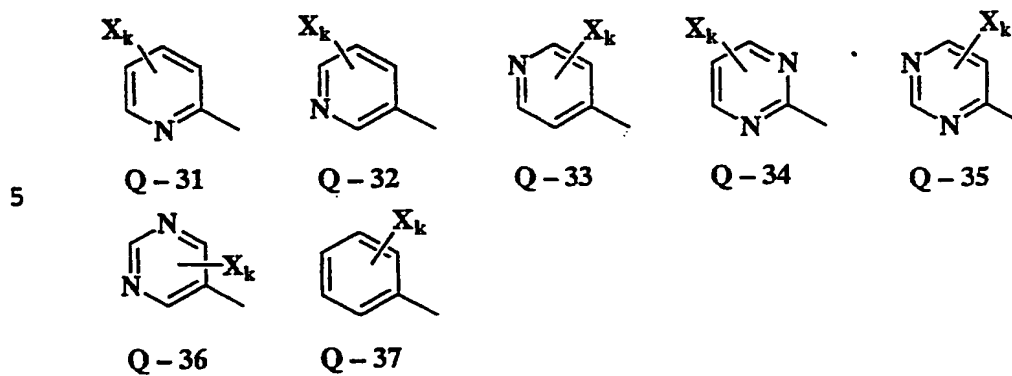


(I)

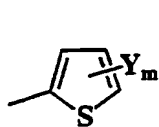
wherein Q is any one of Q-1 to Q-37:



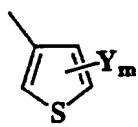
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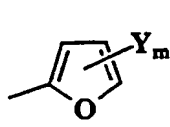
J is any one of J-1 to J-33, provided that when Q is Q-37 and G is G-1, J is other than J-33;



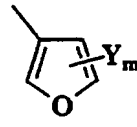
J-1



J-2



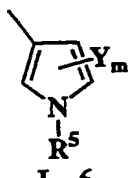
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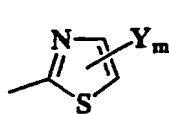
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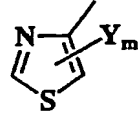
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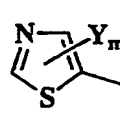
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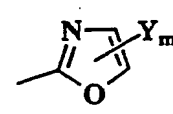
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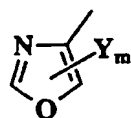
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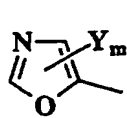
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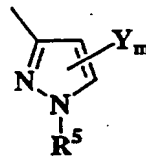
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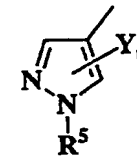
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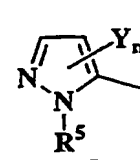
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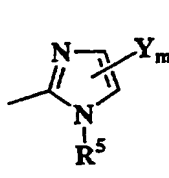
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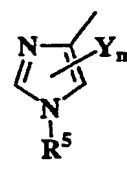
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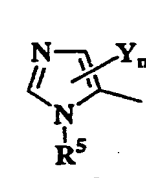
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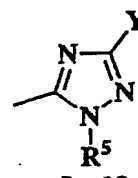
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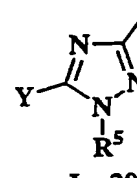
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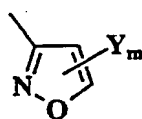
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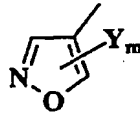
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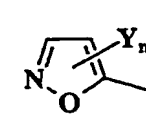
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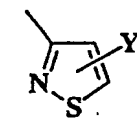
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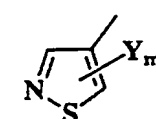
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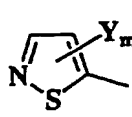
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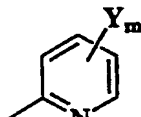
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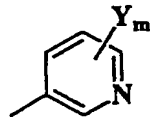
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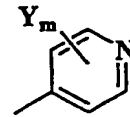
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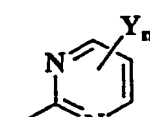
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J-28

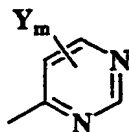


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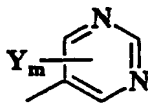


J-30

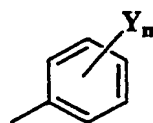
- 253 -



J-31

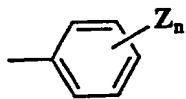


J-32

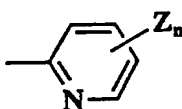


J-33

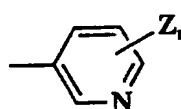
- 5 G is any one of G-1 to G-8, provided that when Q is Q-37 and J is J-33, G is other than G-1;



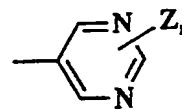
G-1



G-2

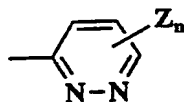


G-3

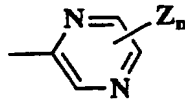


G-4

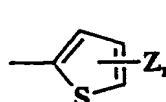
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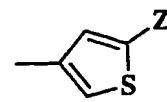
G-5



G-6



G-7



G-8

15

W is an oxygen atom or a sulfur atom;

- each of X, Y and Z which are independent of one another, is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -N₃, -SCN, -NO₂, -SH, -S(O)_rR⁷, -OCHO, -CHO, -C(O)R⁷, -C(O)OR⁷, -C(O)NR⁷R⁸, -S(O)₂NR⁷R⁸, -NR⁷R⁸, -NR⁸CHO, -NR⁸C(O)R⁷, -NR⁸C(O)NHR⁷, -NR⁸S(O)₂R⁷, -SiR¹⁸R¹⁹R²⁰, -SF₅, a phenyl group which may be substituted by (R⁶)_q, a pyridyl group which may be substituted by (R⁶)_q, or a C₁₋₆
- 20
- 25

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alkyl group which may be substituted by $(R^9)_p$, provided that when k, m or n is 2, and two X, Y or Z are adjacent to each other, they may form $-\text{CH}=\text{CH}-\text{CH}=\text{CH}-$, $-\text{OCH}_2\text{O}-$, $-\text{OCF}_2\text{O}-$, $-\text{OCH}_2\text{CH}_2\text{O}-$, $-\text{OCH}_2\text{C}(\text{CH}_3)_2\text{O}-$, $-\text{CF}_2\text{CF}_2\text{O}-$ or

5 $-\text{OCF}_2\text{CF}_2\text{O}-$;

each of R^1 , R^2 and R^3 which are independent of one another, is a hydrogen atom, a C_{1-6} alkyl group, a C_{2-6} alkenyl group, a C_{2-6} alkynyl group, a C_{1-6} haloalkyl group, a C_{2-6} haloalkenyl group, a C_{2-6} haloalkynyl group, 10 a C_{3-6} cycloalkyl group, a C_{3-6} halocycloalkyl group, a C_{4-7} cycloalkylalkyl group, $-\text{CHO}$, $-\text{C}(\text{O})\text{R}^7$, $-\text{C}(\text{O})\text{OR}^7$, $-\text{C}(\text{O})\text{SR}^7$, $-\text{C}(\text{S})\text{R}^7$, $-\text{C}(\text{S})\text{SR}^7$, $-\text{C}(\text{O})\text{C}(\text{O})\text{OR}^7$, $-\text{NR}^{10}\text{R}^{11}$, $-\text{N}=\text{CR}^{11}\text{R}^{12}$, $-\text{P}(\text{O})(\text{OR}^{13})_2$, $-\text{P}(\text{S})(\text{OR}^{13})_2$, $-\text{S}(\text{O})_r\text{R}^7$, $-\text{S}(\text{O})_2\text{CH}_2\text{C}(\text{O})\text{OR}^7$, $-\text{S}(\text{O})_r\text{N}(\text{R}^{14})\text{C}(\text{O})\text{OR}^{15}$, $-\text{S}(\text{O})_r\text{NR}^{16}\text{R}^{17}$, a 15 phenyl group which may be substituted by $(R^6)_q$, or a C_{1-6} alkyl group which may be substituted by $(R^9)_p$;

each of R^4 and R^5 which are independent of each other, is a hydrogen atom, a C_{1-6} alkyl group, a C_{2-6} alkenyl group, a C_{2-6} alkynyl group, a C_{1-6} haloalkyl group, a C_{2-6} haloalkenyl group, a C_{2-6} haloalkynyl group, 20 a C_{3-6} cycloalkyl group, a C_{3-6} halocycloalkyl group, a C_{4-7} cycloalkylalkyl group, a C_{2-6} alkoxyalkyl group, a C_{2-6} alkylthioalkyl group, a C_{1-6} nitroalkyl group, a C_{2-6} cyanoalkyl group, a C_{3-8} alkoxy carbonylalkyl group, $-\text{CHO}$, 25 $-\text{C}(\text{O})\text{R}^7$, $-\text{C}(\text{O})\text{OR}^7$, $-\text{C}(\text{O})\text{NR}^7\text{R}^8$, or $-\text{S}(\text{O})_2\text{NR}^7\text{R}^8$;

R^6 is a hydrogen atom, a halogen atom, a hydroxyl group, $-\text{CN}$, $-\text{NO}_2$, a C_{1-6} alkyl group, a C_{1-6} haloalkyl

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group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₂₋₆ alkoxycarbonyl group, an amino group, or a di-C₁₋₆

5 alkylamino group;

R⁷ is a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, 10 a C₂₋₆ alkoxyalkyl group, a C₂₋₆ alkylthioalkyl group, a C₁₋₆ nitroalkyl group, a C₂₋₆ cyanoalkyl group, a C₃₋₈ alkoxycarbonylalkyl group, a phenyl group which may be substituted by (R⁶)_q, a benzyl group which may be substituted by (R⁶)_q, or a pyridyl group which may be 15 substituted by (R⁶)_q;

R⁸ is a hydrogen atom, a C₁₋₄ alkyl group, a C₂₋₄ alkenyl group, or a C₂₋₄ alkynyl group;

provided that when R⁷ and R⁸ are bonded to the same atom, they may together form -CH₂CH₂CH₂CH₂-,

20 -CH₂CH₂CH₂CH₂CH₂-, -CH₂CH₂OCH₂CH₂-;

R⁹ is a C₁₋₃ alkoxy group, a C₁₋₃ haloalkoxy group, -CN, -NO₂, -S(O)_rR⁷, -P(O)(OR¹³)₂, -P(S)(OR¹³)₂, -C(O)R⁷, -C(O)OR⁷, or a phenyl group which may be substituted by (R⁶)_q;

25 R¹⁰ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group,

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a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, a C₂₋₇ alkoxyalkyl group, a C₂₋₇ haloalkoxyalkyl group, a C₂₋₇ alkylthioalkyl group, a C₂₋₇ cyanoalkyl group, a C₃₋₈ alkoxycarbonylalkyl group, 5 -C(O)R⁷, -C(O)OR⁷, -C(O)NR⁷R⁸, -S(O)₂NR⁷R⁸, -S(O)₂R⁷, a phenyl group which may be substituted by (R⁶)_q, a benzyl group which may be substituted by (R⁶)_q, or a pyridyl group which may be substituted by (R⁶)_q;

R¹¹ is a hydrogen atom, a C₁₋₄ alkyl group, -C(O)R⁷, 10 or -C(O)OR⁷;

R¹² is a hydrogen atom, a C₁₋₄ alkyl group, a C₁₋₄ haloalkyl group, or a phenyl group which may be substituted by (R⁶)_q;

provided that R¹¹ and R¹² may together form 15 -CH₂CH₂CH₂CH₂-, or -CH₂CH₂CH₂CH₂CH₂-;

R¹³ is a C₁₋₃ alkyl group, or a phenyl group which may be substituted by (R⁶)_q;

R¹⁴ is a C₁₋₄ alkyl group;

R¹⁵ is a C₁₋₁₈ alkyl group;

20 Each of R¹⁶ and R¹⁷ which are independent of each other, is a C₁₋₄ alkyl group, or R¹⁶ and R¹⁷ may together form -CH₂CH₂CH₂CH₂-, -CH₂CH₂CH₂CH₂CH₂-, or -CH₂CH₂OCH₂CH₂-;

each of R¹⁸ and R¹⁹ which are independent of each other, is a C₁₋₄ alkyl group;

25 R²⁰ is a C₁₋₄ alkyl group, or a phenyl group which may be substituted by (R⁶)_q;

k is an integer of from 0 to 5, provided that when k

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is from 2 to 5, the plurality of X may be the same or different;

m is an integer of from 0 to 5, provided that when m is from 2 to 5, the plurality of Y may be the same or
5 different;

n is an integer of from 0 to 5, provided that when n is from 2 to 5, the plurality of Z may be the same or different;

p is an integer of from 1 to 3, provided that when p
10 is 2 or 3, the plurality of R⁹ may be the same or different;

q is an integer of from 0 to 4, provided that when q is from 2 or 4, the plurality of R⁶ may be the same or different; and

15 r is an integer of from 0 to 2.

2. The semicarbazone derivative or its salt according to Claim 1, wherein:

X is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆
20 haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -NO₂, -S(O)_rR⁷, -OS(O)₂R⁷, or -C(O)OR⁷;

Y is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl
25 group, a C₂₋₆ alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group, a C₃₋₆ cycloalkyl group, a C₃₋₆

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halocycloalkyl group, a C₄₋₇ cycloalkylalkyl group, -OR¹⁰,
-CN, -NO₂, -S(O)_rR⁷, -S(O)₂NR⁷R⁸, -OS(O)₂R⁷, or -C(O)OR⁷,
provided that when m is 2, and two Y are adjacent to each
other, they may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-,

5 -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or -OCF₂CF₂O-;

Z is a halogen atom, a C₁₋₆ alkyl group, a C₂₋₆
alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl
group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group,
a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a
10 C₄₋₇ cycloalkylalkyl group, -OR¹⁰, -CN, -NO₂, -S(O)_rR⁷,
-S(O)₂NR⁷R⁸, -OS(O)₂R⁷, -C(O)OR⁷, or -SF₅, provided that
when n is 2, and two Z are adjacent to each other, they
may form -CH=CH-CH=CH-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-,
-OCH₂C(CH₃)₂O-, -CF₂CF₂O-, or -OCF₂CF₂O-;

15 R¹ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆
alkenyl group, a C₂₋₆ alkynyl group, a C₁₋₆ haloalkyl
group, a C₂₋₆ haloalkenyl group, a C₂₋₆ haloalkynyl group,
a C₃₋₆ cycloalkyl group, a C₃₋₆ halocycloalkyl group, a
C₄₋₇ cycloalkylalkyl group, -CHO, -C(O)R⁷, -C(O)OR⁷,
20 -S(O)_rR⁷, -S(O)_rN(R¹⁴)C(O)OR¹⁵, -S(O)_rNR¹⁶R¹⁷, a phenyl
group which may be substituted by (R⁶)_q, or a C₁₋₆ alkyl
group which may be substituted by (R⁹)_p;

R² is a hydrogen atom, a C₁₋₆ alkyl group, a C₁₋₆
alkyl group which may be substituted by (R⁹)_p, or
25 -C(O)OR⁷;

R³ is a hydrogen atom, a C₁₋₆ alkyl group, -CHO,
-C(O)R⁷, -C(O)OR⁷, -C(O)SR⁷, -NR¹⁰R¹¹, -N=CR¹¹R¹²,

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$-S(O)_2R^7$, $-S(O)_rN(R^{14})C(O)OR^{15}$, or $-S(O)_rNR^{16}R^{17}$;

each of R^4 and R^5 which are independent of each other, is a hydrogen atom, a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{3-6} cycloalkyl group, a C_{2-6} alkoxyalkyl group, a C_{2-6} alkylthioalkyl group, $-C(O)OR^7$, $-C(O)NR^7R^8$, or $-S(O)_2NR^7R^8$;

R^7 is a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{3-6} cycloalkyl group, or a phenyl group which may be substituted by $(R^6)_q$;

10 R^9 is a C_{1-3} alkoxy group, $-CN$, or $-C(O)OR^7$;

R^{10} is a hydrogen atom, a C_{1-6} alkyl group, a C_{1-6} haloalkyl group, a C_{3-6} cycloalkyl group, a C_{2-7} haloalkoxyalkyl group, or a C_{3-6} halocycloalkyl group;

15 k is an integer of from 0 to 2, provided that when k is 2, two X may be the same or different;

m is an integer of from 0 to 3, provided that when m is 2 or 3, the plurality of Y may be the same or different;

20 n is an integer of from 1 to 3, provided that when n is 2 or 3, the plurality of Z may be the same or different; and

p is 1.

3. The semicarbazone derivative or its salt according to Claim 2, wherein Q is $Q-1$, $Q-2$, $Q-3$, $Q-4$, $Q-5$, $Q-8$, $Q-9$, $Q-10$, $Q-14$, $Q-15$, $Q-16$, $Q-17$, $Q-18$, $Q-22$, $Q-25$, $Q-27$, $Q-28$, $Q-29$, $Q-30$, $Q-31$, $Q-32$ or $Q-37$.

4. The semicarbazone derivative or its salt according to

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Claim 2, wherein J is J-1, J-2, J-7, J-8, J-9, J-10, J-13, J-14, J-15, J-24, J-25, J-26, J-27, J-28, J-30 or J-33.

5 5. The semicarbazone derivative or its salt according to Claim 2, wherein G is G-1.

6. The semicarbazone derivative or its salt according to Claim 3, wherein is J-1, J-2, J-7, J-8, J-9, J-10, J-13, J-14, J-15, J-24, J-25, J-26, J-27, J-28, J-30 or J-33, and G is G-1.

10 7. The semicarbazone derivative or its salt according to Claim 5, wherein Q is Q-1 or Q-37, m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or different, and n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the
15 substituted position is the 3-position, the 4-position or the 3- and 4-positions.

8. The semicarbazone derivative or its salt according to Claim 5, wherein J is J-33, m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or
20 different, and the substituted position is the 3-position, the 4-position or the 3- and 4-positions, and n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the substituted
25 position is the 3-position, the 4-position or the 3- and 4-positions.

9. The semicarbazone derivative or its salt according to Claim 6, wherein:

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W is an oxygen atom;

X is a hydrogen atom, a halogen atom, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, or a C₁₋₆ haloalkylsulfonyloxy group;

Y is a halogen atom, a cyano group, a nitro group, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₂₋₇ alkoxycarbonyl group, a C₂₋₇ haloalkoxycarbonyl group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, or -CH=CH-CH=CH-, -OCH₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -CF₂CF₂O-, -OCF₂O- or -OCF₂CF₂O- bridging the adjacent carbon atoms;

Z is a halogen atom, a cyano group, a nitro group, a C₁₋₆ alkyl group, a C₁₋₆ haloalkyl group, a C₁₋₆ alkoxy group, a C₁₋₆ haloalkoxy group, a C₁₋₆ alkylthio group, a C₁₋₆ haloalkylthio group, a C₁₋₆ alkylsulfinyl group, a C₁₋₆ haloalkylsulfinyl group, a C₁₋₆ alkylsulfonyl group, a C₁₋₆ haloalkylsulfonyl group, a C₁₋₆ alkylsulfonyloxy group, a C₁₋₆ haloalkylsulfonyloxy group, a SF₅ group, or

-CH=CH-CH=CH-, -OCH₂O-, -OCH₂CH₂O-, -OCH₂C(CH₃)₂O-, -OCF₂O-, -OCF₂CF₂O- or -OCF₂CF₂- bridging the adjacent carbon atoms;

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m is an integer of 1 or 2, provided that when m is 2, two Y may be the same or different;

n is an integer of 1 or 2, provided that when n is 2, two Z may be the same or different, and the substituted position is the 3-position, the 4-position or the 3- and 4-positions;

R¹ is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkoxyalkyl group or a C₂₋₆ alkylthioalkyl group;

R² is a hydrogen atom, a C₁₋₆ alkyl group, a C₂₋₆ alkoxyalkyl group, or a -C(O)O-C₁₋₆ alkyl group; and

R³ is a hydrogen atom, an amino group, a C₁₋₆ alkyl group, a -C(O)-C₁₋₆ alkyl group or a -C(O)O-C₁₋₆ alkyl group.

10. A pesticide which contains at least one semicarbazone derivative of Claim 1 to 9 as an active ingredient.

11. An insecticide which contains at least one semicarbazone derivative of Claim 1 to 9 as an active ingredient.

International Application No
PCT/JP 96/02022

A. CLASSIFICATION OF SUBJECT MATTER					
IPC 6	C07D333/38	C07D333/36	A01N47/34	C07D307/68	C07D277/56
	C07D277/42	C07D277/82	C07D213/87	C07D213/78	C07D231/16
	C07D231/38	C07D207/32	C07D521/00	C07D239/34	

According to International Patent Classification (IPC) or to both national classification and IPC

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim No.
Category *	Citation of document, with indication, where appropriate, of the relevant passages	

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.

X	<p>DATABASE WPI Week 9535 Derwent Publications Ltd., London, GB; AN 95-265767 XP002016753 & JP,A,07 165 697 (NISSAN CHEM IND LTD) , 27 June 1995 see abstract</p>	1-11
P,X	<p>& WO,A,96 10560 (...) 11 April 1996 see abstract; claims 1,7; examples</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	1-11

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

*E earlier document but published on or after the international filing date

document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

*P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

'&' document member of the same patent family

Date of the actual completion of the international search

24 October 1996

Name and mailing address of the ISA
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Date of mailing of the international search report

30. 10. 96

Authorized officer

Paisdor, B

INTERNATIONAL SEARCH REPORT

International Application No
PC1/JP 96/02022

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEMICAL ABSTRACTS, vol. 124, no. 7, 19 February 1996 Columbus, Ohio, US; abstract no. 86903, B. MODZELWSKA: "The reaction of N3-substituted amidrazones of 4-picoline with isothiocyanates" page 1304; column 1; XP002016750 see abstract & ACTA. POL. PHARM., vol. 52, no. 4, 1995, pages 297-300, see for example RN 172661-74-4 and 172661-61-9	1-9
X	--- CHEMICAL ABSTRACTS, vol. 117, no. 25, 1992 Columbus, Ohio, US; abstract no. 251312, L.S. SAMOILENKO ET AL.: "Synthesis of substituted 2-amino-4-methylpyrimidine based on the arylamides of alpha-phenylaminomethylidene-beta-ketothio butyric acid" page 688; column 1; XP002016751 see RN 144681-02-7 see abstract & UKR. KHIM. ZH. (RUSS. ED.), vol. 57, no. 4, 1991, pages 409-414,	1-9
X	--- CHEMICAL ABSTRACTS, vol. 95, no. 1, 1981 Columbus, Ohio, US; abstract no. 7159, T. BANY ET AL.: "Synthesis of some derivatives of 1,2,4-triazole and 1,3,4-thiadiazole using N3-substituted amidrazones as starting materials" page 678; column 1; XP002016752 see RN 76686-91-4 and 63279-72-1 see abstract & ANN. UNIV. MARIAE CURIE-SKLODOVSKA, SECT. AA: PHYS. CHEM., vol. 31-32, 1980, pages 277-283, --- -/--	1-9

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP 96/02022

C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>JOURNAL OF THE CHEMICAL SOCIETY, SECTION C: ORGANIC CHEMISTRY, vol. 67, no. 8, 1967, LETCHWORTH GB, pages 742-746, XP002016749</p> <p>F. KURZER ET AL.: "Heterocyclic compounds from urea derivatives. Part XI. Synthesis of 1,2-diamino-3-phenylguanidine" see page 745, column 2, last paragraph</p> <p>-----</p>	1-9

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP 96/02022

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

see next sheet
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/

The subject-matter of claims 1-11 encompasses such an enormous amount of compounds, that carrying out a complete search was found to be impossible on economic grounds even by means of on-line searching. Thus, the search has been limited to the subject-matter of the claims insofar as is represented by the examples, i.e. the formula(I) of claim 1 has been limited to those compounds in which G represents a group G1.

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